

# 2007 University of Missouri Extension Annual Report

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2007 University of Missouri Extension Annual Report

## I. Report Overview

### 1. Executive Summary

University of Missouri Extension (MU Extension) had a very productive year in achieving its goals as set out in the 2007 plan of work. MU Extension's 2007 programs addressed such issues as: the growing obesity problem in Missouri; building a sustained holistic economic development model in Missouri; food productivity and safety in Missouri's agricultural arena; and building tomorrow's leaders through our 4-H Youth program.

Our stakeholders continue to articulate the need for more programming from us at a time of diminishing budget. We continue to incorporate the use of technology in our delivery systems in order to leverage the human capacity that we have. MU is contributing to programming efforts in eXtension as well as developing a more comprehensive and accessible website for our stakeholders. We are also seeking alternative funding from grants, gifts, and fee generation to further leverage the resources that we receive from our state, federal, and county partners.

Our latest random telephone survey of Missourians and our continuous feedback from county stakeholders confirms our value to them as a credible, objective, research based educational resource. Our goal for 2008 will be to continue to improve the product and method of delivery so that we can serve an increasingly diverse and growing audience.

#### Total Actual Amount of professional FTEs/SYs for this State

Year:2007	Extension		Research	
	1862	1890	1862	1890
Plan	262.0	0.0	0.0	0.0
Actual	239.6	0.0	0.0	0.0

## II. Merit Review Process

### 1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External Non-University Panel

### 2. Brief Explanation

In addition to reviewing the stakeholder input from all 114 counties, regional and state faculty surveyed current literature to identify state-wide demographics, national and state trends, and discipline specific research related to program effectiveness.

Based on this review, state-wide priority needs were identified and programs in response to those priorities were developed by faculty. The program priorities along with their program logic models were then reviewed by the appropriate state program leader to assure the programs are both relevant and of high quality.

State-wide program priorities were utilized by regional faculty to develop a local programming response to their county's identified needs. The resulting proposed county program plan was then taken to the county council for their acceptance. Once approved, the programming was delivered and the impact evaluated.

By establishing this ongoing merit review process of: stakeholder needs identification; program response by faculty; stakeholder feedback; and outcome assessment, the quality and relevance of programs will be maintained.

## III. Stakeholder Input

### 1. Actions taken to seek stakeholder input that encouraged their participation

- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey of the general public
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals

#### **Brief Explanation**

University of Missouri Extension has gathered opinions of Missouri residents in a variety of ways to assist us in determining the critical issues of strategic importance. Our goals in developing the methodologies for the stakeholder input process were to: diversify the audiences in order to gain a better perspective on the reach and effectiveness of our programs; to diversify the gathering process so we could utilize the feedback for both program prioritization and also to gain knowledge as to preferred delivery methods as well as general awareness of our programs; and finally to gather some program specific information and diversity needs information in a more substantive way in order to gain a better understanding of the issues underlying the needs for us to be more effective in our programming response.

The methods used in our stakeholder input gathering were as follows:

- Statewide telephone Survey
  - o 1,005 urban and rural residents participated in a random-sample telephone survey.
- Community Conversations on Economic Development
  - o 200 people were engaged in 16 regional community conversations on economic development
- Diversity Discussions
  - o 130 African Americans, Latinos and other under-served individuals provided input at 12 diversity discussions.
- Web-based Survey
  - o 6,839 people completed a satisfaction survey on our Web site content.
- County and Regional Needs Assessments
  - o 1,133 county extension council members identified issues of concern at local and regional needs assessment sessions.
- Meetings with State Agencies
  - o Meetings with directors of state agencies to receive feedback on their priority issues and where we might partner in the future.

#### **2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them**

##### **1. Method to identify individuals and groups**

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups

#### **Brief Explanation**

University of Missouri Extension has gathered opinions of Missouri residents in a variety of ways to assist us in determining the critical issues of strategic importance. Our goals in developing the methodologies for the stakeholder input process were to: diversify the audiences in order to gain a better perspective on the reach and effectiveness of our programs; to diversify the gathering process so we could utilize the feedback for both program prioritization and also to gain knowledge as to preferred delivery methods as well as general awareness of our programs; and finally to gather some program specific information and diversity needs information in a more substantive way in order to gain a better understanding of the issues underlying the needs for us to be more effective in our programming response.

#### **2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them**

##### **1. Methods for collecting Stakeholder Input**

- Meeting with traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of the general public
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals

#### **Brief Explanation**

University of Missouri Extension has gathered opinions of Missouri residents in a variety of ways to assist us in determining the critical issues of strategic importance. Our goals in developing the methodologies for the stakeholder input process were to: diversify the audiences in order to gain a better perspective on the reach and effectiveness of our programs; to diversify the gathering process so we could utilize the feedback for both program prioritization and also to gain knowledge as to preferred delivery methods as well as general awareness of our programs; and finally to gather some program specific information and diversity needs information in a more substantive way in order to gain a better understanding of the issues underlying the needs for us to be more effective in our programming response.

### **3. A statement of how the input was considered**

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities

#### **Brief Explanation**

Our stakeholders continue to emphasize three themes which have driven our strategic plan and thus our programming: economic viability; strong individuals, families and communities; and healthy environments.

Included in these broad themes, our stakeholders have specifically identified their desire for access to additional educational opportunities and the need for communities to retain their young adults in order to survive as a viable economic entity. Economic development has also become an ever recurring need as identified by our stakeholders.

#### **Brief Explanation of what you learned from your Stakeholders**

Our stakeholders continue to emphasize three themes which have driven our strategic plan and thus our programming: economic viability; strong individuals, families and communities; and healthy environments.

Included in these broad themes, our stakeholders have specifically identified their desire for access to additional educational opportunities and the need for communities to retain their young adults in order to survive as a viable economic entity. Economic development has also become an ever recurring need as identified by our stakeholders.

### **IV. Expenditure Summary**

<b>1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)</b>			
<b>Extension</b>		<b>Research</b>	
<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
8120859	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	7734772	0	0	0
Actual Matching	7734772	0	0	0
Actual All Other	0	0	0	0
Total Actual Expended	15469544	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous years				
Carryover	0	0	0	0

## V. Planned Program Table of Content

S. NO.	PROGRAM NAME
1	Watershed Management and Planning
2	Forage Production and Management
3	Home Horticulture and Environment
4	Individual Wastewater Systems-Implications for a New Rural Generation
5	Missouri Crop Management Systems
6	Missouri Master Wildlifer
7	Missouri Woodland Steward
8	Pasture Based Dairy Systems
9	MO-PORK: Increasing Pork Production in Missouri
10	Plant Protection for the 21st Century
11	Profit Focused Agriculture
12	Show-Me-Select Replacement Heifer Program
13	Applying Science and Technology
14	Building Character
15	Choosing Healthy Lifestyles
16	Creating Economic Preparedness
17	Enhancing Community Viability Through Youth Leadership
18	Volunteer Development
19	Improving Communications
20	Building Environments
21	Parenting
22	Strengthening Families
23	Building Better Childcare for Missouri
24	Food Safety
25	Personal Financial Management
26	Nutrition, Health and Physical Activity
27	Facilitating Community Decision Making for Youth and Adults
28	Ensuring Safe Communities
29	Community Leadership Development for Youth and Adults
30	Building Inclusive Communities
31	Creating Community Economic Viability
32	Aging
33	Business Development

**Program #1****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Watershed Management and Planning

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	5%			
111	Conservation and Efficient Use of Water	5%			
112	Watershed Protection and Management	40%			
131	Alternative Uses of Land	10%			
133	Pollution Prevention and Mitigation	5%			
608	Community Resource Planning and Development	30%			
723	Hazards to Human Health and Safety	5%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	6.3	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
399419	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Invite people from Missouri watershed communities to participate in workshops to develop partnerships for watershed management as part of the Heartland 406 (b) USDA grant. Facilitate deliberative sessions with agency partners and others to discuss strategies for expanding collaborative efforts and roles each agency might fill in assisting communities in watershed management activities. Continue efforts to assist communities in the development of watershed management plans.

**2. Brief description of the target audience**

Target audience will consist of local watershed community citizens, elected officials, agency leaders and staff members with a concern or a part to play in watershed management activities. Extension state and regional specialists will have opportunities to attend regional workshops designed to keep abreast of the most current and reliable sources of information relating to a process of working with local communities to develop and implement watershed management plans.

### V(E). Planned Program (Outputs)

#### 1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	1200	7000	1800	3000
2007	1160	1473	650	1468

#### 2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year      Target

Plan:     0

2007 :    0

Patents listed

#### 3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

### V(F). State Defined Outputs

Output Target

**Output #1****Output Measure**

- Two educational classes will be held to help agency and Extension personnel to understand the process for involving local cor

Year	Target	Actual
2007	2	2

**Output #2****Output Measure**

- Four workshops per year will be held at the regional level and at the multistate level on issues surrounding watershed manage

Year	Target	Actual
2007	4	6

**Output #3****Output Measure**

- One-on-one consultations will be given with those clients and agency personnel working directly with watershed planning and

Year	Target	Actual
2007	3500	1160

**Output #4****Output Measure**

- Group discussion will be held with 15 watersheds in the developmental stages of watershed planning.

Year	Target	Actual
2007	15	15

**Output #5****Output Measure**

- Two demonstrations per year will be held in watershed areas to demonstrate the effectiveness of best management practices

Year	Target	Actual
2007	2	3

**Output #6****Output Measure**

- 3 studies in MO will be conducted with assistance from Iowa State Univ and with funding through a USDA Water Quality 406 c

Year	Target	Actual
2007	3	3



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Each year, three workshops (Watershed Management and Planning) will empower local people and agency personnel to organize watershed advisory groups to begin a process of evaluating, planning and implementing strategies for protecting water resources.
2	Collaborative partnerships will be expanded and strengthened in the development and delivery of science-based watershed information and resources to local watershed communities.
3	Each year, two watershed planning and management educational programs will be developed and implemented in identified watersheds.
4	Five watershed communities each year will be actively involved in the development of watershed management plans in various geographic regions of the state.
5	Three new watershed management advisory groups will be formed each year.
6	Each year, three watershed groups will implement watershed management plans that focus on improving water quality.
7	Each year, three watershed communities will develop watershed management plans that have been approved by the Missouri Department of Natural Resources.
8	Each year, three communities, with approved plans, are using the plans in the development of watershed management plans for total maximum daily loads (TMDLs), source water protection, and other land use planning decisions affecting their watershed.
9	Fifteen watersheds will be targeted for watershed management planning, development and implementation. An advisory committee will select the watersheds for the programming efforts.

**Outcome #1****1. Outcome Measures**

Each year, three workshops (Watershed Management and Planning) will empower local people and agency personnel to organize watershed advisory groups to begin a process of evaluating, planning and implementing strategies for protecting water resources.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

It is critical for local citizens to take responsibility for their actions and for strategies to correct water quality issues. Agency professionals are beginning to understand the importance of local participation in developing and implementing watershed plans. There is an accepted process to be used in getting community involvement and empowering local people. The process creates a group of citizens who are responsible and willing to carry out activities to reach a desired outcome.

**What has been done**

Workshops have been used to create awareness and to promote local decision making. Local citizens must become engaged in the decision making process and develop understanding of the issues and their role and responsibility in addressing them. Surveys showed that few citizens understand what is required and their role in watershed planning. After attending the workshop, citizens and agency personnel understand the importance of local decision making in watershed planning.

**Results**

As a result of the workshops, local citizens were more likely to participate in the leadership of watershed planning. They had a better idea of what was expected of them and why citizen involvement was encouraged in the planning process for watershed management. Agency personnel and local citizens have been working together as partners in planning watershed activities and actions. Local citizens are excited about their role in developing a plan that can address environmental concerns.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
112	Watershed Protection and Management
608	Community Resource Planning and Development
723	Hazards to Human Health and Safety
111	Conservation and Efficient Use of Water

**Outcome #2****1. Outcome Measures**

Collaborative partnerships will be expanded and strengthened in the development and delivery of science-based watershed information and resources to local watershed communities.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
112	Watershed Protection and Management

**Outcome #3****1. Outcome Measures**

Each year, two watershed planning and management educational programs will be developed and implemented in identified watersheds.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Local citizens want to have input in watershed planning but many times lack the skill. Agency personnel have recognized the importance of local participation and input and encourage citizens to become involved. Citizens are reluctant to provide input without having a better understanding of what they are doing and what is expected of them.

**What has been done**

Education classes have been held with selected groups to develop an understanding and increase knowledge of watershed management planning and the role it plays in long-term watershed health. The classes focused on basics of watershed planning, how to identify local needs, the role of agency personnel, selection of practices and implementation strategies for engaging citizens and improving water quality.

**Results**

Class participants increased their knowledge of watershed planning and had a better understanding of what is expected of them and how the watershed plan can be used to promote long-term water quality and community-based decision making. After the training, local watershed leaders were willing to participate in all phases of watershed planning and take responsibility for creating committees and providing leadership. Participants became stronger advocates in recruiting other citizens to work on the watershed plan.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
112	Watershed Protection and Management
723	Hazards to Human Health and Safety
111	Conservation and Efficient Use of Water
608	Community Resource Planning and Development

**Outcome #4****1. Outcome Measures**

Five watershed communities each year will be actively involved in the development of watershed management plans in various geographic regions of the state.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Private citizens and agency personnel recognize the importance of safe water for human health, economic growth and regulatory compliance. Drinking water that is free from contaminants is vital for human health. The economic impact of clean water supplies for industry, tourism, and agriculture cannot be overstated. Water quality standards have been set at the federal level based on intended use for those water resources. These standards must be met to ensure a healthy and safe environment.

**What has been done**

A course for water quality education and planning was held to emphasize the importance of using science-based information and developing locally led groups. In selected communities representing different watersheds, meetings have been held and groups have developed a structure to produce a watershed plan. Displays and presentations at state conferences and local activities have promoted the need for watershed planning and the role of local citizens and agency personnel.

**Results**

Five groups are actively developing watershed plans to respond to environmental degradation in their areas. Numerous planning meetings have been used to identify local concerns and establish priorities for corrective measures. More than \$75,000 in planning grants has been awarded by the Missouri Department of Natural Resources (DNR) to assist with the watershed planning process. Resource materials have been developed and distributed to group leaders on how to establish a watershed group and what are the components of a watershed plan. Extension was instrumental in developing a template for watershed plans that DNR found acceptable for watershed groups to use when developing the first component of their watershed plan. This template has been adopted by agency personnel who are assisting watershed groups with preparing their plans.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
111	Conservation and Efficient Use of Water
608	Community Resource Planning and Development
723	Hazards to Human Health and Safety
112	Watershed Protection and Management

**Outcome #5****1. Outcome Measures**

Three new watershed management advisory groups will be formed each year.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Approximately 93 percent of Missouri's land is privately owned. Missouri DNR believes local leadership is important in identifying local concerns and establishing a long-term plan for watershed protection. Citizens want input in watershed activities. A local advisory group establishes citizens' role in decision making and establishing criteria for implementing practices to improve or protect water quality.

**What has been done**

Watershed community meetings have been held where people were identified as wanting to work on a watershed committee. One-on-one consultation with local leaders has helped to establish a core working group as the advisory committee that included local landowners and agency personnel. Meetings have been held to identify potential resource personnel and sources of funding and to establish criteria for watershed planning.

**Results**

Three watersheds, Big River, Elkhorn Creek and North Fork of the Spring, have established advisory committees to promote local leadership and action in developing watershed plans. A series of events has been offered to increase public awareness of the situation and get more active citizen involvement. The advisory groups have received resource materials to assist them with capacity building and buy-in by local citizens. Advisory groups have looked to local agency personnel to assist with technical, educational and financial assistance and have identified other local citizens with skills or services that will be useful in developing a watershed plan.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
112	Watershed Protection and Management
723	Hazards to Human Health and Safety
608	Community Resource Planning and Development
111	Conservation and Efficient Use of Water

**Outcome #6****1. Outcome Measures**

Each year, three watershed groups will implement watershed management plans that focus on improving water quality.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri citizens and agency personnel recognize the importance of a clean, safe water supply that supports human and environmental health. Regulatory limits for certain pollutants can have an adverse effect on the economic base of some watershed communities. These communities must understand the role that citizens play in addressing an environmental concern that can affect the economic growth and health of the community and the health of the environment.

**What has been done**

Watershed planning has occurred in response to local- and state-identified concerns for water quality. Local agency personnel have identified cost-share opportunities for implementing management practices and demonstration sites have been developed to show management techniques and the rationale for specific management practices. Application has been made for grants to support, outreach, cost-share and implementation of watershed plans.

**Results**

Outreach events have occurred to inform more local residents of what is going on in the watershed. A list of practices to improve water quality has been prioritized. Educational classes have been offered to promote understanding of management practices and how these practices can be implemented and how they will improve water quality. Grants have been received through EPA/DNR 319 and SWCD/SALT for cost-sharing the implementation of management practices. Through cost-share, practices have been installed to reduce or control soil erosion, nutrient and pesticide runoff, and streambank degradation. By implementing practices identified by local residents, regulatory compliance for the watershed is close to being met.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
723	Hazards to Human Health and Safety

**Outcome #7****1. Outcome Measures**

Each year, three watershed communities will develop watershed management plans that have been approved by the Missouri Department of Natural Resources.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

It is important to agency personnel that local citizens be involved in developing and implementing watershed plans. These plans become the basis for activities, implementation of management practices and monitoring pollutant loads to show how volunteer efforts in a watershed help meet water quality goals. Local citizens want to have input in the decision making process for their area. Development of a watershed plan shows local input and decision making to accomplish locally driven goals.

**What has been done**

Meetings have been held with local watershed groups to identify the components of a plan and where they can find the information and people to assist them. A template has been established for the criteria necessary for a watershed plan. Agency personnel have provided information on watershed characteristics and how they affect pollution in the watershed. Informational meetings have been held to keep the watershed community involved in the components of the plan.

**Results**

Locally led watershed groups have been formed to work with agency personnel to develop a watershed plan that has local input and criteria. A template for a watershed plan has been developed and approved for watershed committee use. Watershed plans from three watersheds have been submitted for approval. A web site has been established to help identify critical map layers for the general information within watersheds. Several grants have been submitted for implementation of the watershed practices once the plan has been approved by DNR.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
112	Watershed Protection and Management
723	Hazards to Human Health and Safety
111	Conservation and Efficient Use of Water
608	Community Resource Planning and Development

**Outcome #8****1. Outcome Measures**

Each year, three communities, with approved plans, are using the plans in the development of watershed management plans for total maximum daily loads (TMDLs), source water protection, and other land use planning decisions affecting their watershed.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri DNR is mandated to complete total maximum daily load (TMDL) documents on 75 water bodies. These documents have a public participation component and identify all but the implementation component of watershed protection. If the TMDL is not addressed, implementation of mandated practices may be detrimental to the local watershed economy. This gives local citizens a desire for input in the decision making process and helps improve environmental and economic viability for the watershed.

**What has been done**

DNR has worked directly with Extension to establish a link with local citizens to develop a watershed plan. Community meetings have been held, including informational sessions on TMDLs and programs on source water protection to reduce the input of pollutants into water bodies.

### Results

Through informational sessions, local groups have focused their watershed plan development on addressing TMDLs. This has been done through newsletters, news articles and displays at local events. With input from local citizens and advisory board members, management practices have been identified that effectively mitigate the TMDL concern. Grants totaling more than \$1.4 million have been received to implement practices that will address the TMDL for the watersheds. Management practices have been installed that reduce or control pollutant loading. Load reduction determinations are made based on the practices being implemented. Source water protection for drinking water reservoirs with TMDLs have been developed in two watersheds to directly address contaminants that adversely affect drinking water quality. Citizen groups are actively engaged in working with agency personnel in providing information, education and technical support in implementing plans to address TMDL issues.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
608	Community Resource Planning and Development
112	Watershed Protection and Management
723	Hazards to Human Health and Safety

#### Outcome #9

##### 1. Outcome Measures

Fifteen watersheds will be targeted for watershed management planning, development and implementation. An advisory committee will select the watersheds for the programming efforts.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	3	5

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Citizens of the state and agency personnel are directly involved in trying to improve state water resources through locally developed watershed plans. DNR, NRCS and DoH are working with Extension to identify priority watershed areas on the state 303 (d) list.

###### What has been done

Extension is working with agency personnel to establish criteria for determining priority watersheds that are found on the state 303 (d). Modeling and GPS data layers of watershed characteristics are used to determine critical areas that have high potential for water quality degradation. These areas are targeted for watershed plan development and funding opportunities.

### Results



Meetings were held with agency personnel to develop criteria for selection of watersheds that need to develop plans. A set of input criteria was used to determine the potential success within these watersheds to respond to pollutant loading and water quality degradation. Many of these watersheds are listed on the state 303 (d) list of impaired bodies and will be required to develop a watershed plan to address water quality concerns. Once the list of watersheds was compiled, meetings were held in the watersheds to discuss the criteria for their ranking as a priority watershed and what pollutants have been targeted by state agencies. Local groups have been formed to discuss the goal for the local area. Advisory groups and watershed committees have been formed to start developing a watershed plan with the nine elements required by DNR. Several groups have applied for planning grants to assist with writing the watershed plan.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
608	Community Resource Planning and Development
111	Conservation and Efficient Use of Water
723	Hazards to Human Health and Safety

#### V(H). Planned Program (External Factors)

##### External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

##### Brief Explanation

Changes in priority watershed have caused a need to re-evaluate which watersheds need to be worked with for the state. Another key factor is on work responsibilities and work load of agency personnel that work directly with watershed planning efforts. As funding becomes tighter for agency personnel, personnel numbers may become less and cause workload changes and structures. The funding cycle that government sets for these planning events and the timeframe they are willing to work with. For long-term water quality protection, local citizens who own the land must buy-in to the process and voluntarily work with agency to fix the problem. This requires the development of relationships between watershed citizens and agency personnel and local citizen input and buy-in and can take several years just to establish a working group that the citizens feel comfortable with. Priority changes due to flooding and tornados direct personnel and resources to other activities that originally have been identified for watershed planning.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Case Study
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

##### Evaluation Results

Post-class evaluations of the Water Quality Short Course showed that 87 percent of participants would use the information when assisting with watershed planning and implementation. Several case studies have shown how watershed groups continue to address water quality concerns over several years. Each case has demonstrated (1) an increase in knowledge about watersheds and the importance of planning, (2) a change in the way best management practices are selected to protect water quality, and (3) a reduction in pollutant loading. Vandalia, Jack's Fork and Shelbina have been included in the case studies.

Agency personnel developed criteria to set priorities among watersheds needing to address water quality concerns. A template was designed by extension personnel for developing a watershed plan. This template was approved by DNR and is currently being used by priority watersheds.

Many of the watershed groups have submitted and received planning grants to develop watershed plans. More than \$75,000 was received for planning by local watersheds.

A webpage was developed by the University of Missouri to assist watershed groups in finding data layers for developing watershed plans. The web link consists of data layers that are necessary to determine critical or priority areas within the watershed.

For those groups that have approved plans, more than \$1.4 million has been received in the past year to implement practices and provide information to watershed residents.

#### **Key Items of Evaluation**

Training for agency professionals is important in delivering a consistent message. Nearly 90 percent of class participants said they would use the information in watershed planning.

Watershed management and planning must incorporate the input of citizens in communities most directly affected. Without local involvement in the selection and design of the watershed plan, long-term water quality improvement will not occur. This may be the single most important criterion in implementing a watershed plan. Case studies show that when local groups have input, they are willing to continue to work toward water quality goals.

Developing criteria for identifying priority watersheds is mandatory in giving a consistent message to landowners.

Proper tools and templates to develop a watershed management plan allow local people to become more involved in decision making and to understand the reason for the plan.

Flexibility of agency personnel to work with local groups and accept management practices that are locally identified is important in getting citizens involved in the process.

Science-based management practices are necessary to protect watersheds, but local decisions must be the driving force with agency personnel.

**Program #2****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Forage Production and Management

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
205	Plant Management Systems	40%			
307	Animal Management Systems	40%			
402	Engineering Systems and Equipment	20%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	10.0	0.0	0.0	0.0
<b>Actual</b>	5.0	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b> 316999	<b>1890 Extension</b> 0	<b>Hatch</b> 0	<b>Evans-Allen</b> 0
<b>1862 Matching</b> 0	<b>1890 Matching</b> 0	<b>1862 Matching</b> 0	<b>1890 Matching</b> 0
<b>1862 All Other</b> 0	<b>1890 All Other</b> 0	<b>1862 All Other</b> 0	<b>1890 All Other</b> 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Forage Production and Management will use multiple delivery methods to reach the target audience: regional three-day schools on management-intensive grazing; pasture-based dairying core group meeting and "pasture walks; winter feeding systems and summer pasture program using demos, clinics, and tours. Fescue toxicosis and management workshops; Missouri Forage and Grassland Council Forage Conference; field days at outlying research centers; MU forage websites and multistate websites (cooperating with Oregon State University), electronic guides; CDs with prepared presentations; in-service training (ISEs) for regional staff; news releases for the general public; and popular press articles.

**2. Brief description of the target audience**

The primary target audience includes Missouri forage and livestock producers. These are mainly producers of beef and dairy cattle, although the program does address forages for other livestock, such as sheep, goats and horses, and nonlivestock forage producers, such as hay producers and wildlife conservationists. The program also targets industry and government, as it presents current science, technology and training to agricultural business and policymakers.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	5000	20000	1000	0
2007	5787	9034	262	470

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Provide two in-service training sessions for regional Extension specialists on an annual basis.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2	2

**Output #2****Output Measure**

- Develop or revise four guide sheets on an annual basis for

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	4	1

**Output #3****Output Measure**

- Revise Missouri publication M168, Missouri Dairy Grazing Manual.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Nine hundred (900) producers will annually attend a management-intensive grazing (MiG) school.
2	Twenty thousand (20,000) Missouri producers will increase their awareness of stockpiling and summer pasture management for beef cattle.
3	Two hundred (200) Missouri farmers will increase their knowledge of fescue toxicosis.
4	Two thousand (2,000) Missouri producers will install fencing and watering systems as a result of the MiG schools.
5	Ten thousand (10,000) producers will stockpile forage and develop specific pastures for summer grazing.
6	Ten thousand (10,000) producers will implement new forage management practices into their operation.

**Outcome #1****1. Outcome Measures**

Nine hundred (900) producers will annually attend a management-intensive grazing (MiG) school.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	450

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Forages represent a significant renewable natural resource for Missouri with more than 9.7 million acres in pastures and harvested forages. Missouri produces 7.1 million tons of hay (including alfalfa hay) or 4.7 percent of the total hay produced in the United States. The management-intensive grazing schools teach producers how to manage this natural resource in an environmentally friendly way and for increased profit.

**What has been done**

Thirty-two grazing schools were held throughout Missouri. The schools are three days in length and cover topics such as: the basics of developing and managing a grazing plan, fencing, watering, selecting forages, winter stockpiling, economics, and soil testing.

**Results**

More than 450 producers attended the grazing schools throughout the eight regions of the state. More than 90 percent of the producers who attended these workshops indicated they plan to adopt fencing, watering and pasture management changes as presented in the schools. Fifty percent of those producers implemented these changes without cost-share assistance.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
307	Animal Management Systems
402	Engineering Systems and Equipment
205	Plant Management Systems

**Outcome #2****1. Outcome Measures**

Twenty thousand (20,000) Missouri producers will increase their awareness of stockpiling and summer pasture management for beef cattle.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	3800

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Cow-calf producers in Missouri suffer from low farm income and small profit margins. Nearly half of their income is spent for livestock feed during January, February, and March. Hay represents about 90 percent of the cost for winter feed. In addition, commodity feed prices have nearly doubled in the past six months, making supplemental feeding expensive.

**What has been done**

Based on a thorough assessment of available technology, the Winter Feeding Systems for Beef Cattle curriculum was assembled to teach producers six different techniques to reduce the cost of feeding a beef cow during winter. These techniques are: 1) timely use of stockpiled tall fescue to extend the grazing season, 2) grazing winter annual forages, 3) ammoniation to improve quality of low-quality hay, 4) use of alfalfa hay to improve feed quality, 5) low-cost silage making, and 6) minimization of losses during hay feeding.

**Results**

More than 3,800 producers attended educational programming on "Winter Feeding Systems for Beef Cattle." The adoption rate of practices outlined in these programs was approximately 46 percent. From 1998 to 2005, the percentage of producers using stockpiled tall fescue for winter feeding has doubled, from 26 percent to more than 52 percent. The increased use of stockpiled tall fescue saves the state's beef producers \$19 million dollars annually.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
402	Engineering Systems and Equipment
205	Plant Management Systems
307	Animal Management Systems

**Outcome #3****1. Outcome Measures**

Two hundred (200) Missouri farmers will increase their knowledge of fescue toxicosis.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	400

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Fescue toxicosis is the most damaging forage-based livestock disorder in Missouri. It has an estimated \$144 million economic impact annually on the Missouri livestock industry.

**What has been done**

The "Tall Fescue Toxicosis and Management" curriculum was modified in 2006. This curriculum was taught at many county workshops and parts were used in forage meetings held in the winter, spring and summer of 2007 and at field days.

**Results**

The MU plant scientists have developed management practices to reduce toxins present in the grass and consumed by the animal. The practices, taught at the workshops, involve cautious fertilization of pastures, moving cattle to nontoxic pastures during the late spring, and seeding in new plant varieties. Missouri farm families are beginning to adopt these management practices, which increase calf gains by a half-pound per day. If only half of the cattle producers adopt the management practices, Missouri's beef industry would realize an additional \$30 million in profits. If the state's cattlemen plant the forthcoming plant varieties on one-third of Missouri's pastures, the state will increase revenue to the beef industry by \$183 million annually; Missouri would see additional profits to other Missouri livestock industries, including dairy cattle and horses.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems

**Outcome #4****1. Outcome Measures**

Two thousand (2,000) Missouri producers will install fencing and watering systems as a result of the MiG schools.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2000	450

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Forages represent a significant renewable natural resource for Missouri with more than 9.7 million acres in pastures and harvested forages. Missouri produces 7.1 million tons of hay (including alfalfa hay) or 4.7 percent of the total hay produced in the United States. The management-intensive grazing schools teach producers how to manage this natural resource in an environmentally friendly way and for increased profit.

**What has been done**

Thirty-two grazing schools were held throughout Missouri. The schools are three days in length and cover topics such as: the basics of developing and managing a grazing plan, fencing, watering systems, selecting forages, winter stockpiling, economics, and soil testing.

**Results**

Many of these farmers are awaiting their funding, which is expected to come.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
402	Engineering Systems and Equipment
307	Animal Management Systems



**Outcome #5****1. Outcome Measures**

Ten thousand (10,000) producers will stockpile forage and develop specific pastures for summer grazing.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10000	3800

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Cow-calf producers in Missouri suffer from low farm income and small profit margins. Nearly half of their income is spent for livestock feed during January, February, and March. Hay represents about 90 percent of the cost for winter feed. In addition, commodity feed prices have nearly doubled in the past six months, making supplemental feeding expensive.

**What has been done**

Based on a thorough assessment of available technology, the Winter Feeding Systems for Beef Cattle curriculum was assembled to teach producers six different techniques to reduce the cost of feeding a beef cow during winter. These techniques are: 1) timely use of stockpiled tall fescue to extend the grazing season, 2) grazing winter annual forages, 3) ammoniation to improve quality of low-quality hay, 4) use of alfalfa hay to improve feed quality, 5) low-cost silage making, and 6) minimization of losses during hay feeding.

**Results**

More than 3,800 producers attended educational programming on "Winter Feeding Systems for Beef Cattle." The adoption rate of practices outlined in these programs was approximately 46 percent. From 1998 to 2005, the percentage of producers using stockpiled tall fescue for winter feeding has doubled, from 26 percent to more than 52 percent. The increased use of stockpiled tall fescue saves the state's beef producers \$19 million dollars annually.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems

**Outcome #6****1. Outcome Measures**

Ten thousand (10,000) producers will implement new forage management practices into their operation.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10000	1500

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri's dairy producers are struggling. Since 1993, 51 percent of Missouri's family dairies have exited the dairy business due to high feed costs, expensive capital investment and low profit margins. To respond to this trend, dairy producers are adopting the pastured-based dairy model so they can lower feed costs, minimize capital investments, increase profit and protect the environment.

**What has been done**

A pasture-based dairies curriculum teaches producers three things: 1) how to develop a written business plan, 2) how to use computerized record keeping, and 3) how to adopt management-intensive grazing. This curriculum required production of new materials ranging from a Dairy Grazing Manual to digital presentations. As the program progressed, the curriculum called for additional materials, including record-keeping software, a "grazing wedge" online calculator for managers, and a website.

**Results**

Several next-generation, larger-scale pasture-based dairies owned by three New Zealand investment groups began development and operation in Missouri. The largest of these dairies manages more than 3,000 cows and the smallest, 500 cows. The New Zealand groups have invested over \$50 million to date and more farms are being developed. One of the investment groups began operating a 500-cow operation in February 2007. By 2008, expansion and growth already planned by these new dairies is expected to increase the total new investment to \$63 million, generate \$28 million in annual milk sales, add \$87 million in total annual economic impact and sustain 777 additional jobs in the state of Missouri. These dairies were attracted to Missouri by the ongoing dairy grazing research and extension efforts being conducted by the University of Missouri.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
307	Animal Management Systems
205	Plant Management Systems
402	Engineering Systems and Equipment

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations

**Brief Explanation**

High feed grain prices have altered the economic landscape such that forage management is more lucrative than ever. For instance, the value of a pound of gain to stocker animals is nearly double that of three years ago. In the dairy industry, producers using management-intensive grazing techniques are much better positioned than are their confinement counterparts to manage high feed prices.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

#### **Evaluation Results**

Financial data from the Missouri pasture-based dairies participating in the financial summaries showed the average farm is expanding in cow numbers. In 2005 the average farm in the group marketed \$2,102 of milk per cow, had total income of \$2,310 per cow, with operating expenses averaging \$1,587 per cow. Operating margins per cow in 2005 were \$723.

#### **Key Items of Evaluation**

**Program #3****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Home Horticulture and Environment

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	5%			
205	Plant Management Systems	50%			
211	Insects, Mites, and Other Arthropods Affecting Plants	10%			
212	Pathogens and Nematodes Affecting Plants	10%			
213	Weeds Affecting Plants	15%			
216	Integrated Pest Management Systems	10%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	9.0	0.0	0.0	0.0
<b>Actual</b>	9.6	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c 608638	1890 Extension 0	Hatch 0	Evans-Allen 0
1862 Matching 0	1890 Matching 0	1862 Matching 0	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Some of the major activities under this program are Master Gardener training (core course), advanced Master Gardener training, Garden 'N Grow training and workshops for garden center employees. Other activities include the Plants of Merit and HortLine programs in cooperation with Missouri Botanical Gardens, homeowner workshops, Lifespan Learners Series, Responsible Home Horticulture Series, booths at home shows and fairs, Plant a Row for the Hungry, Horticulture Therapy in Nursing Homes and the Home\*A\*Syst Program.

**2. Brief description of the target audience**

The ultimate target audience of this program is individuals with an interest in gardening. However, to reach this diverse and highly dispersed audience, MU Extension will need to use several community multipliers of information. One highly important audience will be the Master Gardener volunteers. After receiving training, Master Gardeners contribute volunteer hours to assist with dissemination of horticultural information through speaking engagements, workshops, information booths, youth programs, Extension Center hot lines, demonstration plantings and other activities. Youth groups including 4-H are another important target audience. Many young people will enroll in the Garden 'N Grow program.

## V(E). Planned Program (Outputs)

### 1. Standard output measures

#### Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	5000	10000	500	0
2007	12062	23677	626	244

### 2. Number of Patent Applications Submitted (Standard Research Output)

#### Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

#### Patents listed

### 3. Publications (Standard General Output Measure)

#### Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

## V(F). State Defined Outputs

### Output Target

#### Output #1

##### Output Measure

- Provide two in-service training sessions for regional Extension specialists on an annual basis.

Year	Target	Actual
2007	2	1

#### Output #2

##### Output Measure

- Develop or revise 10 guide sheets a year for regional extension specialists to use in producer meetings.

Year	Target	Actual
2007	10	15

#### Output #3

##### Output Measure

- Two print and electronic newsletters devoted to pest and horticulture crop management will be developed and distributed to re

Year	Target	Actual
2007	24	12

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Master Gardeners, garden center employees, retired persons and home gardeners will become more aware of the importance of plants in people's lives.
2	Master Gardeners, garden center employees, retired persons and home gardeners will increase their knowledge of basic plant growth.
3	Master Gardeners, garden center employees, retired persons and home gardeners will increase their knowledge of which species and varieties of fruits, vegetables and ornamentals are best adapted to Missouri conditions.
4	Master Gardeners, garden center employees, retired persons and home gardener will increase understanding of the basics of plant health care including soils, pruning, fertilization and management of disease problems and insect pests in and around the home.
5	Nursing home managers will become more aware of the potential for horticultural therapy to improve the quality of life for residents.
6	4-H members will improve their gardening skills and awareness of where food comes from.
7	Increase the percentage of Missourians participating in gardening activities.
8	Increase the number of new Master Gardeners completing the core training.
9	Increase sales of Plants of Merit plants.
10	Increase use of soil sampling and plant diagnostic services by home gardeners.
11	Increase the number of nursing homes using horticultural therapy.
12	Increase the number of young people completing the Garden 'N Grow project.
13	Increase the number of Master Gardner volunteer hours and contacts.

**Outcome #1****1. Outcome Measures**

Master Gardeners, garden center employees, retired persons and home gardeners will become more aware of the importance of plants in people's lives.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	8006

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Beneficial effects of plants on human quality of life are well documented. Home gardens improve nutrition, reduce energy costs, encourage physical activity and contribute to psychological well-being. Increasing awareness of these benefits will encourage more Missourians to participate in gardening activities. Master Gardeners and garden center employees are key sources of information for the gardening public.

**What has been done**

Through Master Gardener training, volunteer activities of Master Gardeners, newsletters, press releases and workshops, this program has increased the awareness of over 200,000 individuals about the importance of plants to people.

**Results**

Increased awareness of the beneficial effects of plants on human quality of life increases the likelihood that an individual will increase his or her gardening activity and thereby derive the associated benefits to health and well-being.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #2****1. Outcome Measures**

Master Gardeners, garden center employees, retired persons and home gardeners will increase their knowledge of basic plant growth.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	3969

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Successful gardening requires some basic knowledge of how plants grow and what they require to remain healthy. Increasing the knowledge of Missourians in this area will enhance the enjoyment and health benefits they derive from home gardening.

**What has been done**

Through Master Gardener training, Master Gardener volunteer activities, newsletters, press releases, greenhouse grower short courses, Turf and Ornamentals Field Day and other venues, at least 50,000 individuals have received information on basic plant growth. Garden center employees have passed on information gained from workshops and field days to their customers.

**Results**

If 20 percent of the individuals receiving information on basic plant growth made use of the information, then 10,000 had increased gardening success. This would translate into increased enjoyment, improved health and increased spending for plants and gardening supplies.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #3****1. Outcome Measures**

Master Gardeners, garden center employees, retired persons and home gardeners will increase their knowledge of which species and varieties of fruits, vegetables and ornamentals are best adapted to Missouri conditions.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	3969

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Selecting poorly adapted plants for home garden planting can lead to frustration and may discourage people from future gardening activity. Awareness of sources of information on proper plant selection will contribute to gardening success and the benefits derived from it.

**What has been done**

MU Extension hosted three workshops and short courses with great attendance. Specific events included a native plant field day, a tomato festival and a rose workshop at Bradford Research and Extension Center. Attendance included more than 200 people at the Native Plant Field Day, more than 300 at the tomato festival, and 80 at the Rose Workshop. An Osher Lifelong Learning Horticulture short course was also televised via ITV each semester for a total attendance of 40 persons.

**Results**

In addition to the direct contacts noted above, several thousand Missourians learned about plant selection through MU Extension guides, web visits, newsletter articles, Master Gardener training and Master Gardener volunteer activities. Of approximately 1 million web visits to horticulture guides over the reporting period, 98,498 visits were to guides dealing with selection of vegetables or landscape plants for home gardening. There is no doubt information reaching Missourians on this subject influences their plant buying decisions and gardening success.



**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems

**Outcome #4****1. Outcome Measures**

Master Gardeners, garden center employees, retired persons and home gardener will increase understanding of the basics of plant health care including soils, pruning, fertilization and management of disease problems and insect pests in and around the home.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	8006

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Lack of knowledge about basic plant health care can lead to frustration, gardening failures and environmentally damaging applications of fertilizer and pesticides.

**What has been done**

Plant health care information was disseminated through Master Gardener training, Master Gardener volunteer activities, Show-Me Yards workshops, Turf and Ornamentals field day, pesticide applicator training, greenhouse short courses, Missouri Environment and Garden newsletter, press releases, and horticultural guides.

**Results**

Of 3.5 million visits to MU agricultural guides on the web, over the reporting period, 1 million were to horticulture guides and 617,000 to guides on pests around the home. Information gained by Missourians from this source and the other venues noted above allowed thousands of home gardeners to make better decisions about purchasing fertilizers and pesticides.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
101	Appraisal of Soil Resources
213	Weeds Affecting Plants
212	Pathogens and Nematodes Affecting Plants
211	Insects, Mites, and Other Arthropods Affecting Plants
216	Integrated Pest Management Systems
205	Plant Management Systems

**Outcome #5****1. Outcome Measures**

Nursing home managers will become more aware of the potential for horticultural therapy to improve the quality of life for residents.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Persons in assisted living facilities can benefit from gardening through the physical and mental stimulation of working in the garden, as well as the satisfaction and nutritional benefits of growing fresh produce.

**What has been done**

Master Gardeners volunteers contributed 196 hours working with persons in assisted living, teaching gardening and horticultural therapy, and assisting them in working in the gardens and raised beds.

**Results**

The quality of lives of nursing home residents participating in this program improved, and experience gained through this activity will be valuable to Extension specialists wishing to work with this audience in other communities across the state.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #6****1. Outcome Measures**

4-H members will improve their gardening skills and awareness of where food comes from.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	621

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

This program involves young people in gardening and provides them a summer activity. The goals are to allow youths to experience the fun and rewards of gardening, to enjoy success, and to have the satisfaction of sharing harvested food with others in need through the local food agencies. The program also promotes healthy eating among young people by increasing their appreciation of fruits and vegetables.

**What has been done**

Garden 'N Grow has been hosted at three sites throughout Missouri: Kirksville Extension Center, Turn Around Ranch in Joplin, and Jefferson County Home School group. Participants were involved in planning, planting, maintaining and harvesting garden plots under the guidance of volunteer leaders.

**Results**

Sixty youths participated, and 21 volunteers contributed 502 hours of volunteer service. Over 1,000 pounds of produce was donated by one group alone to the Adair County Salvation Army Food Pantry. Several programs received grants to support their efforts. One group targeted home school children and received a grant through the county health department to promote healthy eating.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

### Outcome #7

#### 1. Outcome Measures

Increase the percentage of Missourians participating in gardening activities.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	2500	8006

#### 3c. Qualitative Outcome or Impact Statement

##### Issue (Who cares and Why)

Beneficial effects of gardening on human quality of life are well documented. Among other benefits, home gardening improves nutrition, reduces energy costs, encourages physical activity and contributes to psychological well-being. People who begin gardening are likely to derive these benefits for their entire lives.

##### What has been done

Through Master Gardener training, Master Gardener volunteer activities, press releases, field days and many other activities, thousands of Missourians were exposed to information that would increase the likelihood they will participate in gardening activities.

##### Results

From 2005/2006 to 2006/2007, web visits to MU Horticulture Guides increased from 885,311 to 1,003,139, representing a 13 percent increase. This indicates a significant increase in interest on the part of the gardening public in information to allow them to be successful home gardeners.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

### Outcome #8

#### 1. Outcome Measures

Increase the number of new Master Gardeners completing the core training.

#### 2. Associated Institution Types

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	250	524

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is tremendous demand among the general public for gardening information. Some of these clients take the Master Gardener curriculum to have access to this training. Also, once Master Gardeners are trained, they can then disseminate research-based information throughout their county and improve the knowledge base among home gardeners in their communities.

**What has been done**

Through core training programs across the state, 524 new Master Gardeners completed the program and became eligible to fulfill their commitments to volunteer activities.

**Results**

New Master Gardeners taking this training are much more aware and able to use and promote the resources of the University of Missouri and MU Extension. They are better educated gardeners, and therefore hopefully more environmentally aware gardeners. Master Gardeners have stated post-training that they definitely make better informed purchases and use of home pesticide products. They actively promote the purchase of plants from local nursery and garden centers.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
216	Integrated Pest Management Systems
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
213	Weeds Affecting Plants
212	Pathogens and Nematodes Affecting Plants

**Outcome #9****1. Outcome Measures**

Increase sales of Plants of Merit plants.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

"Plants of Merit" is a cooperative program with Missouri Botanical Garden, University Extension, Powell Gardens and Mizzou Botanic Garden designed to promote the use of plants most likely to perform well for gardeners in Missouri. The program will also generate increased sales of plants by participating nurseries.

**What has been done**

New plants were selected for promotion in 2008 and presented to nursery representatives during Nursery Day at the Missouri Botanical Garden. Presentations were made to Master Gardener groups regarding how they can promote the program through volunteer activities such as tours of Plants of Merit specimens planted on the MU Campus (Mizzou Botanic Garden).

**Results**

While no data are available on increased sales of Plants of Merit plants, nurseries and individuals donated \$17,000 in support of the program, and \$2500 was generated by sales of Plants of Merit brochures, posters and signs.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
216	Integrated Pest Management Systems
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants

**Outcome #10****1. Outcome Measures**

Increase use of soil sampling and plant diagnostic services by home gardeners.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

To make logical and environmentally sound decisions regarding fertilization and pest control measures to keep plants healthy, individuals must identify soil nutritional deficiencies and pest organisms. An increase in the number of samples sent to the MU Soil and Plant Diagnostic Services Laboratory indicates increasing awareness of this need.

**What has been done**

Through newsletter articles, press releases, Master Gardener training and other venues, MU Soil and Plant Diagnostic Services Laboratory staff and other faculty members have consistently promoted use of the lab as a management tool.

**Results**

The number of plant diagnostic samples increased from 566 to 585 between 2006 and 2007. Home lawn and garden soil samples increased from 4,237 to 4,270 over the same period. Individuals receiving reports from the MU Soil and Plant Diagnostic Services Laboratory used the information to improve the effectiveness of fertilizer and pesticide applications. They were then less likely to misapply materials that might result in environmental degradation.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
213	Weeds Affecting Plants
101	Appraisal of Soil Resources
211	Insects, Mites, and Other Arthropods Affecting Plants
216	Integrated Pest Management Systems

**Outcome #11****1. Outcome Measures**

Increase the number of nursing homes using horticultural therapy.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Persons in assisted living facilities can benefit from gardening through the physical and mental stimulation of working in the garden, as well as the satisfaction and nutritional benefits of growing fresh produce.

**What has been done**

Master Gardeners volunteers contributed 196 hours working with persons in assisted living, teaching gardening and horticultural therapy, and assisting them in working in the gardens and raised beds.

**Results**

The quality of lives of nursing home residents participating in this program improved, and experience gained through this activity will be valuable to Extension specialists wishing to work with this audience in other communities across the state.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #12****1. Outcome Measures**

Increase the number of young people completing the Garden 'N Grow project.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	500	81

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

This program involves youths in gardening and provides a summer activity for young people. The goals are to allow youth to experience the fun and rewards of gardening, to enjoy success, and to have the satisfaction of sharing harvested food with others in need through the local food agencies. The program also promotes healthy eating among young people by increasing their appreciation of fruits and vegetables.

#### **What has been done**

Garden 'N Grow has been hosted at three sites throughout Missouri: Kirksville Extension Center, Turn Around Ranch in Joplin, and Jefferson County Home School group. Participants were involved in planning, planting, maintaining and harvesting garden plots under the guidance of volunteer leaders.

#### **Results**

Sixty youths participated, and 21 volunteers contributed 502 hours of volunteer service. Over 1,000 pounds of produce was donated by one group alone to the Adair County Salvation Army Food Pantry. Several programs received grants to support their efforts. One group targeted home school children and received a grant through the county health department to promote healthy eating.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems

#### **Outcome #13**

##### **1. Outcome Measures**

Increase the number of Master Gardner volunteer hours and contacts.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Action Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	2500	3000

##### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

The Master Gardener program provides in-depth research-based horticultural education to individuals throughout Missouri who then return volunteer time applying what they have learned to help others in their communities. This, in turn, enhances horticultural awareness of citizens and encourages them to become involved in home gardening.

#### **What has been done**

State specialists have worked to support the Master Gardener program through curriculum development and presentations in the core training. Local Master Gardener volunteers staff answering services and hotlines, and teach general public workshops and short courses.

#### **Results**

The average number of volunteer hours spent on public service activities was 896 hours per county. The total number of volunteer hours statewide was 121,849 contributed by 1,671 individuals with an estimated dollar value of nearly \$2.5 million.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
212	Pathogens and Nematodes Affecting Plants
216	Integrated Pest Management Systems
213	Weeds Affecting Plants
205	Plant Management Systems

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101	Appraisal of Soil Resources
211	Insects, Mites, and Other Arthropods Affecting Plants

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## V(H). Planned Program (External Factors)

### External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Competing Public priorities
- Competing Programmatic Challenges

### Brief Explanation

Staffing limitation was the major factor affecting program outcome. Most state Extension specialists in horticulture have responsibilities in teaching, research and extension and, therefore, have limited time to devote to this program. Regional Horticulture Specialists have responsibilities in up to 10 counties and in multiple program areas. Also, there have been several regional specialist vacancies that have reduced the FTE available for Home Horticulture and Environment program activity. Responses to requests for information on helping plants recover from drought, ice storms and freezing injury have taken a considerable amount of time on the part of state and regional specialists as well.

## V(I). Planned Program (Evaluation Studies and Data Collection)

### 1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)

### Evaluation Results

Surveys collected at the end of nearly all Master Gardener core training series ask participants to evaluate program effectiveness and impact on their likelihood of adopting improved gardening practices. On a scale of 1-4, with 4 best, the average rating tends to be about 3.5. Results of a follow-up survey mailed to participants in the Show-Me Yards and Neighborhoods workshops in Columbia, MO, are indicative of the potential impact of a workshop focusing in improved horticultural practices. With a 25 percent return rate of 200 mailed surveys, 70 percent of the respondents changed the amount of fertilizer they applied to their lawns. Sixteen percent had taken a soil test of their lawns since attending a workshop. Seventy-four percent of the respondents reduced the amount of pesticides used on their lawns. Forty-four percent of the respondents had measured their lawns. This would likely lead to more accurate application rates of fertilizer and pesticides. Seventy-one percent of the respondents indicated they are reading fertilizer and pesticide labels more closely. Twelve percent indicated they had determined where stormwater leaves their property since the workshop. Ninety-two percent said the workshops had caused them to make changes in the actions they used in establishing and maintaining their lawns.

### Key Items of Evaluation

It is evident from the reception by the gardening public of programs such as Master Gardener and Show Me Yards and Neighborhoods that there is a tremendous demand for information about gardening. Also, home gardeners are increasingly concerned about the effects of their gardening activities on environmental quality. Furthermore, it is apparent that, given high quality, understandable information, gardeners tend to be willing to change their practices to be more environmentally responsible based on this information.

- 133 - Pollution prevention and mitigation
- 102 - Soil, plant, water, nutrient relationships
- 723 - Hazards to human health and safety
- 111 - Conservation and effective use of water
- 112 - Watershed protection and management
- 803 - Sociological and Technical Change Affecting Individuals, Families and Communities



**Program #4****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Individual Wastewater Systems-Implications for a New Rural Generation

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	15%			
111	Conservation and Efficient Use of Water	5%			
112	Watershed Protection and Management	15%			
133	Pollution Prevention and Mitigation	20%			
723	Hazards to Human Health and Safety	30%			
803	Sociological and Technological Change Affecting Individuals,	15%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	4.0	0.0	0.0	0.0
<b>Actual</b>	2.1	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
133140	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Field days will be offered to show how to properly install and maintain on-site sewage systems. A core curriculum is developed for training in on-site sewage system basics and site selection. Workshops will be offered to increase awareness and skills for selection of on-site systems and site location. Professional education credit classes will be offered to keep real estate professions, home inspectors and installers updated and trained on the latest technologies and alternative systems available. Media (printed, radio, television coverage) are used to increase awareness of programs and classes.

**2. Brief description of the target audience**

The primary audience for this program is on-site sewage system installers, inspectors, home-loan inspectors, lenders, real estate appraisers and real estate professionals. This course is being offered to agency personnel to assist them in understanding site selection limitations and alternative on-site systems that can be used in environmentally sensitive areas.

### V(E). Planned Program (Outputs)

#### 1. Standard output measures

##### Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	500	1500	0	0
2007	1053	25	13	0

#### 2. Number of Patent Applications Submitted (Standard Research Output)

##### Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

##### Patents listed

#### 3. Publications (Standard General Output Measure)

##### Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

### V(F). State Defined Outputs

#### Output Target

##### Output #1

##### Output Measure

- A core curriculum will be produced and used for the PEC courses.

Year	Target	Actual
2007	6	6

##### Output #2

##### Output Measure

- University of Missouri Extension will offer classes totaling between 4.5 and 6 hours of professional education credit each year

Year	Target	Actual
2007	6	6

##### Output #3

##### Output Measure

- Evaluations will be given at each training session to determine the effectiveness of the course.

Year	Target	Actual
2007	6	6

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Five hundred (500) on-site sewage installers, real estate professionals and home inspectors will increase their awareness and have access to on-site sewage information technologies.
2	Five hundred (500) on-site sewage installers, real estate professionals and home inspectors will increase their understanding of how an on-site sewage system works and the importance of soils in determining the type of on-site system being installed.
3	Agency personnel will understand the functions of on-site sewage systems.
4	Five hundred (500) class participants will increase their awareness of on-site system alternatives and when they should be used.
5	There will be an increase in the number of alternative on-site sewage systems being installed in environmentally sensitive areas.
6	There will be reduced risk to human health from waterborne bacteria due to fecal coliform.
7	Five hundred (500) class participants will incorporate information about human health risk and environmental quality when evaluating site selection and on-site system design during inspections and land transfers.
8	In areas of class participation, 1,500 on-site systems will be installed under latest guidelines that protect environmental quality through reduced wastewater nutrients in surface and groundwater supplies.

**Outcome #1****1. Outcome Measures**

Five hundred (500) on-site sewage installers, real estate professionals and home inspectors will increase their awareness and have access to on-site sewage information technologies.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	500

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri citizens are concerned with the amount of nutrients and bacteria entering water systems from improper on-site sewage systems. Many soil types and new home sites in environmentally sensitive areas are not suited to traditional on-site systems. System failure pollutes the environment, causes water degradation and creates habitat for bacteria and vectors that cause human sickness. Newer technologies for proper on-site sewage disposal can add between \$8,000 and \$20,000 to home cost.

**What has been done**

Educational programs are offered to real estate professionals, installers, home inspectors and lenders on the design and selection of on-site sewage systems and new technologies being implemented for environmental protection. On-site sewage system demonstrations are used to show installation and effectiveness of new technologies for wastewater removal for proper environmental and human health.

**Results**

More than 500 people have attended educational classes or demonstrations concerning new technologies for on-site sewage systems and wastewater disposal. The classes have increased awareness and knowledge of the new technology, cost of alternative systems, cost of installation and maintenance requirements.

There has been an increase in the number of alternative systems put into place based on the new technology to improve wastewater effluent. The Missouri Department of Health has increased the number of on-site inspections for installation of alternative new technologies by 30 percent over the last two years. It is anticipated this will increase as people become more aware of the environmental and water quality protection offered by the alternative systems.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
112	Watershed Protection and Management
102	Soil, Plant, Water, Nutrient Relationships
133	Pollution Prevention and Mitigation

**Outcome #2****1. Outcome Measures**

Five hundred (500) on-site sewage installers, real estate professionals and home inspectors will increase their understanding of how an on-site sewage system works and the importance of soils in determining the type of on-site system being installed.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	500

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Much of the area surrounding lakes and streams that support tourism is environmentally sensitive. Nutrient and bacterial loading in Missouri's waters from on-site sewage systems has destroyed aquatic habitat and increased the potential for human health risk. Water degradation can reduce overall aquatic diversity and habitat and can destroy tourism and recreational activities associated with water sports. On-site sewage education is important to protect the environment and the economic baseline.

**What has been done**

Classes are offered to increase knowledge of soil systems and their role in wastewater disposal. Demonstrations for real estate professionals, home inspectors, installers and homeowners have been used to show maintenance of on-site sewage systems and how proper soil characteristics can be part of the treatment system for wastewater or act as a barrier to nutrient and bacteria treatment. Mini-grants have been used to do demonstrations and cost-share for septic tank cleaning and maintenance.

**Results**

More than 30 people attended the "Soil Percolation Requirements for On-site Sewage course" and over 300 people have taken the beginning installers class in the last two years. With increased understanding of how on-site systems work and the role of soil, more landowners are installing systems that will reduce the potential for wastewater contamination. The classes emphasize the function of on-site sewage system components, the role of soil in protecting water quality and identification of soils that are not acceptable for wastewater treatment by conventional drainage systems. As more people have become familiar with the role of soils, county ordinances are being written to require a soil morphology report before an on-site sewage system can be installed. Septic tank pumpers in demonstration areas have seen an increase in business in more environmentally sensitive areas as they learn the importance of maintenance and the function of a septic tank.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
133	Pollution Prevention and Mitigation
112	Watershed Protection and Management
723	Hazards to Human Health and Safety

**Outcome #3****1. Outcome Measures**

Agency personnel will understand the functions of on-site sewage systems.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Many agency personnel are responsible for ensuring water bodies are protected. Improper on-site sewage systems have the potential to pollute water bodies. Bacteria and nutrients enter the water bodies and destroy aquatic habitat and increase algae growth. Bacteria can cause disease and make water unfit for consumption and recreation. Increasing the knowledge of agency personnel is one way to help protect water quality.

**What has been done**

Agency personnel have attended classes and demonstrations on the function of on-site sewage systems. The classes give attendees an opportunity to see how various systems work and how to identify when a system may not be working properly. Demonstrations on maintenance and water flow through a system show participants the importance of maintenance and how to identify structurally sound components in the system.

**Results**

After classes, agency personnel have a better understanding of how on-site sewage systems function to protect human health and environmental integrity. Personnel from the Department of Health, Department of Natural Resources (DNR) and the Natural Resources Conservation Service have received the training to increase their understanding and be able to offer assistance to residents and landowners. A change in the state regulations for on-site sewage has occurred reflecting information presented at these classes. The state Department of Health has established minimum guidelines for all new systems being installed, and water quality degradation from on-site sewage wastewater in environmentally sensitive areas has decreased.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
133	Pollution Prevention and Mitigation
723	Hazards to Human Health and Safety
112	Watershed Protection and Management

**Outcome #4****1. Outcome Measures**

Five hundred (500) class participants will increase their awareness of on-site system alternatives and when they should be used.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Real estate professionals, on-site sewage installers and Department of Natural Resources personnel have an interest in what type of system needs to be installed to meet environmental standards. In land and home transfers, having to replace an on-site system can increase the cost of a home. For installers, knowing the proper system to install to stay in compliance saves money for consumers. DNR personnel want to see the environment protected and water quality improved.

#### **What has been done**

Class participants received educational materials and resource notebooks comparing the different systems and landscape and soils characteristics to determine which system works best based on these characteristics. A field tour of the Bradford Farm on-site sewage training site shows the different alternative systems.

#### **Results**

Department of Health personnel have used the information from the training to establish baseline criteria for on-site inspections. The Natural Resources Conservation Service has used the information gained to update the Missouri publication of on-site sewage systems and soils suitability. The Department of Natural Resources relies on the knowledge learned when reviewing watershed plans and soil characteristics. Real estate professionals and home inspectors use this knowledge when working directly with clientele concerning inspections for land transfers and property sales. One southwest Missouri county has developed a "sunset" law to require residents with older non-working systems to be replaced or brought into compliance.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
133	Pollution Prevention and Mitigation
112	Watershed Protection and Management
723	Hazards to Human Health and Safety
102	Soil, Plant, Water, Nutrient Relationships

#### **Outcome #5**

##### **1. Outcome Measures**

There will be an increase in the number of alternative on-site sewage systems being installed in environmentally sensitive areas.

##### **2. Associated Institution Types**

- 1862 Extension

##### **3a. Outcome Type:**

Change in Action Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

###### **Issue (Who cares and Why)**

Real estate professionals and agency personnel involved in water quality protection are very concerned with on-site sewage systems in environmentally sensitive areas. Missouri has a variety of soil types and Karst materials that do not allow for proper wastewater treatment. These conditions create a high potential for contaminated wastewater to enter the environment and destroy water quality for humans and aquatic life unless alternative systems are used.

###### **What has been done**

Demonstrations have been done to show the different types of alternative systems that work effectively in environmentally sensitive areas. A new pamphlet lists alternative systems, explains when they work most effectively, and summarizes their cost and maintenance requirements.

###### **Results**

County ordinances have been developed that require a soil morphology report before installing an on-site system. The report shows those soils that would be classified as environmentally sensitive and provides criteria for determining what type of system will function properly. Approximately 56 percent of Missouri's counties only allow soil morphology reports for determining if an area needs an alternative system. Real estate professionals are better equipped to respond to the needs of clientele when discussing the hidden cost of home building on lands in environmentally sensitive areas.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
723	Hazards to Human Health and Safety
133	Pollution Prevention and Mitigation
102	Soil, Plant, Water, Nutrient Relationships

#### Outcome #6

##### 1. Outcome Measures

There will be reduced risk to human health from waterborne bacteria due to fecal coliform.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Private citizens and agency personnel are concerned with how human health may be affected by improperly treated wastewater. The improperly treated water can rise to the surface and create human health issues or may enter groundwater, where it may get into private water supplies.

###### What has been done

A class that discusses the components and functions of an on-site system describes the role of both the septic tank and the soil in treating bacteria. Displays have been used to increase awareness of the importance of testing private water wells and doing wellhead protection.

###### Results

County health departments routinely provide water test bottles to check water quality of drinking water wells. In targeted areas, there has been an increase in request for bottles to check for bacteria in wells. Wellhead protection assessments have been done by extension specialists to prevent surface water contamination, and shock chlorination has been performed. County health department personnel have worked with assessments and demonstration of on-site sewage systems and provided information on the potential for disease from contaminated surface and groundwater from improper wastewater treatment.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
723	Hazards to Human Health and Safety

#### Outcome #7



**1. Outcome Measures**

Five hundred (500) class participants will incorporate information about human health risk and environmental quality when evaluating site selection and on-site system design during inspections and land transfers.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Home inspectors, realtors and agency personnel need to recognize the importance of reducing environmental and health risk from on-site sewage. As water quality and human health become everyone's responsibility, providing a consistent message to the general public will tend to increase proper selection and installation of on-site sewage systems.

**What has been done**

Demonstrations of proper pumping and maintenance of an on-site sewage system have been used to teach participants how to discuss the human and environmental health consequences when on-site systems are not properly maintained. Brochures are distributed describing the need to protect human and environmental health through proper maintenance and system selection. A grant providing cost-share for pumping septic tanks has been used to increase participation.

**Results**

Information by Department of Health personnel has increased awareness of private well water testing for bacteria. In one selected area, more than 20 individuals signed up for cost-share assistance to get septic tanks pumped and inspected to determine if their wells were at risk from wastewater. This program also provided residents with an opportunity to see if their tanks were functioning properly or if there was leakage occurring to surface or ground water. Realtors are using this information to assist clients when negotiating home contracts.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
112	Watershed Protection and Management
102	Soil, Plant, Water, Nutrient Relationships
723	Hazards to Human Health and Safety

**Outcome #8****1. Outcome Measures**

In areas of class participation, 1,500 on-site systems will be installed under latest guidelines that protect environmental quality through reduced wastewater nutrients in surface and groundwater supplies.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1500	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Agency personnel involved with human and environmental health are concerned with untreated wastewater and the effects that wastewater nutrients can have on surface and ground water quality. New criteria for on-site systems require more stringent testing of soils to guarantee water quality is protected and that human health risks are kept to a minimum.

**What has been done**

Classes have been offered to increase awareness and knowledge of the purpose of on-site septic systems and their ability to reduce wastewater contamination. Installers are working effectively with county health departments to ensure appropriate systems are selected and properly installed. Training sessions for installers and agency personnel have been offered to provide the latest information on types of systems available and the soils best suited for the different types.

**Results**

Under recently changed state and county ordinances, all new systems going in and all older systems requiring repair must be brought up to meet the latest environmental criteria. These criteria have been set to ensure new systems will provide proper treatment of sludge and wastewater. Educational activities have provided information about the new systems and how to maintain them.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
133	Pollution Prevention and Mitigation
723	Hazards to Human Health and Safety
112	Watershed Protection and Management

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Economy
- Government Regulations
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

All goals have been met at this time. Due to a change in position responsibility, specific classes for real estate professionals may not be held next year. Other external factors may be a change in regulatory requirements that remove funding or support for certain aspects of the program.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)

**Evaluation Results**

Class evaluations were used to determine the effectiveness of training and the usefulness of the information in meeting present job responsibilities. Survey results showed 92 percent of those attending the on-site class for real estate professionals would use the information on a continuing basis and felt they were better prepared to discuss information with clients. In targeted areas, assistance from county health personnel in identifying the number of new and improved systems being installed provided information on how they communicated with clients and their effectiveness in improving human and environmental health. Water quality testing of private wells in areas of concern was performed to determine the percentage of people with high levels of bacteria in drinking water supplies. In one targeted area, about half of wells tested showed unsafe levels of bacteria. The change in county ordinances to require a more extensive soil morphology report for determining suitability of soil for on-site sewage system selection indicates knowledge of soil function in protecting human and environmental health has increased and caused a change in behavior and regulations for on-site sewage installation. In one targeted area, 20 private citizens signed up for cost-share assistance to get septic pumps pumped and inspected. This shows that citizens are engaged in water quality protection.

#### **Key Items of Evaluation**

This project is a true partnership with the Missouri Department of Natural Resources and the Missouri Department of Health and Senior Services. Through planning and discussion, we have been able to identify different aspects of on-site sewage systems that were misunderstood or needed clarification with a varied audience. This included installers, agency personnel, real estate professionals and homeowners. Through the training and demonstration efforts we have been able to see positive changes occurring that should reduce, control or eliminate the potential threats to human and environmental health from improper on-site disposal of sewage. Impact highlights include:

1. Increase in the number of counties (56%) requiring a soil morphology report to determine soil properties for proper selection of on-site sewage system.
2. Evaluations from the on-site sewage class for real estate professionals show that 92 percent felt they would use the knowledge gained on a continuing basis.
3. Increased number of wells tested in one county resulting in about half with bacteria.
4. Twenty people in a target area signed up for cost-share assistance to pump out their septic tanks.
5. Installation of alternative sewage systems is up approximately 30 percent in targeted areas.
6. County ordinances require soil morphology report before permitting on-site sewage system installation.

**Program #5****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Missouri Crop Management Systems

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	20%			
104	Protect Soil from Harmful Effects of Natural Elements	10%			
205	Plant Management Systems	55%			
405	Drainage and Irrigation Systems and Facilities	10%			
512	Quality Maintenance in Storing and Marketing Non-Food Pro	5%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	20.0	0.0	0.0	0.0
<b>Actual</b>	16.6	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
748117	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
313439	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Campus-based and region-based faculty members will conduct several regional workshops and short courses in partnership with commodity groups and private industry. Venues include commodity district meetings, soil and crop conferences, Ag Science Week, regional short courses, field days, and demonstration projects. University of Missouri variety performance evaluations will be conducted in more than 40 locations.

**2. Brief description of the target audience**

The primary target audiences are crop producers and their advisers. Programs will be developed for crop producers with a diversity of farm sizes, crops produced and land resource bases. Crop advisers and service providers are important targets because of their extensive contact with crop and livestock producers, which makes them ideal intermediates in passing on University of Missouri Extension programming to a wider range of producers than could be reached by Extension personnel alone. Because the future of Missouri agriculture depends on young professionals replacing retiring farmers and personnel, youth organizations such as FFA, 4-H, Young Farmers, and their teachers will receive specially designed programs.

### V(E). Planned Program (Outputs)

#### 1. Standard output measures

##### Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	8000	10000	0	0
2007	7980	14422	363	938

#### 2. Number of Patent Applications Submitted (Standard Research Output)

##### Patent Applications Submitted

Year      Target

Plan:    0

2007 :    0

##### Patents listed

#### 3. Publications (Standard General Output Measure)

##### Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

### V(F). State Defined Outputs

#### Output Target

**Output #1****Output Measure**

- Provide four in-service training sessions for regional Extension specialists on an annual basis.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	4	3

**Output #2****Output Measure**

- Develop or revise 15 guide sheets annually for regional Extension specialists to use in producer meetings.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	15	18

**Output #3****Output Measure**

- Develop or revise five manuals on an annual basis

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	2

**Output #4****Output Measure**

- Two print and electronic newsletters devoted to pest and crop management will be developed and distributed to regional speci

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	24	24

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Crop producers will learn sources of information about cultivars and how to interpret them.
2	Crop producers will learn crop rotations and their effects.
3	Crop producers will learn costs and benefits of available soil conservation practices.
4	Crop producers will learn economic impact of improved planting procedures.
5	Crop producers will learn proper irrigation management.
6	Crop producers will learn how management choices in one area affect appropriate choices in other areas.
7	Corn, soybean, wheat, sorghum, and cotton acreage under conservation tillage will increase. (Source: Conservation Technology Information Service)
8	The percentage of soybean acreage planted in a properly developed crop rotation will increase. (Source: USDA/ERS)
9	Seeding rates, average row width, and planting dates will be monitored. (Source: Missouri Agricultural Statistics Service and USDA/ERS)
10	Average yields and production efficiencies will increase. (Source: Missouri Agricultural Statistics Service and USDA/ERS)

**Outcome #1****1. Outcome Measures**

Crop producers will learn sources of information about cultivars and how to interpret them.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Careful variety and hybrid selection is the most important determinant of yield and other measures of crop performance. Farmers need unbiased sources of variety/hybrid information to make informed choices.

**What has been done**

The MU Variety Testing Program planted about 20,000 corn, soybean and grain sorghum plots at nearly 40 locations throughout Missouri. Tests were conducted using appropriate plot design and technique. Results were published in print and electronic format. Electronic format included a web site for each crop tested and CDs containing results from all three crops.

**Results**

More than 8,000 copies of the print publications were mailed to interested farmers and their advisers. The web site was visited nearly 5,000 times.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #2****1. Outcome Measures**

Crop producers will learn crop rotations and their effects.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Properly constructed crop rotations increase yield and decrease the impact of crop production on the environment. Because of the shift in grain prices in 2007, farmers might be tempted to produce continuous corn instead of corn rotated with some other crop, such as soybean.



**What has been done**

Replicated research treatments were established for two years to demonstrate the effect of continuous corn on yield, soil quality and susceptibility to diseases. Results were analyzed and conclusions made available to regional extension specialists. A series of farmer meetings were conducted in the winter and crop advisers were presented information in a hands-on clinic in July.

**Results**

Information regarding the effect of corn planted after corn was provided to more than 300 farmers during a series of winter meetings. Nearly 100 crop advisers participated in a crop management short course. Farmers and their advisers were presented the latest information about the effects of continuous corn using Missouri data. Specific recommendations were provided to help ameliorate the effects on environment and productivity.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
104	Protect Soil from Harmful Effects of Natural Elements
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems

**Outcome #3****1. Outcome Measures**

Crop producers will learn costs and benefits of available soil conservation practices.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The economic well-being of all Missourians depends on a healthy and vibrant agriculture. Nearly 80 percent of Missouri's 29 million acres are devoted to crop and rangeland. In addition, crop sales account for nearly 50 percent of total agricultural cash receipts (nearly \$5 billion).

**What has been done**

Workshops, field days and special training sessions were held for commercial crop advisers.

**Results**

One hundred fifty professional crop advisers from Missouri, Arkansas, Tennessee and Mississippi attended a 16-contact-hour continuing education seminar on weed identification and herbicide symptomatology at the Delta Center. These advisers were responsible for providing advice and technical assistance to a client base ranging from 50 to 1,000 farmers, who managed a total of 25,000 to 10 million acres.

Two hundred twenty-five (225) crop advisers attended the three-day Crop Management Conference. Presentations were made in one general session and 14 concurrent sessions. Session topics included life sciences, nitrogen management, energy savings, soybean rust, herbicide injuries, biofuels, sunflowers, soybean management, and weather information sources. These crop advisers influence decisions on more than 8.5 million acres and will have an impact on production efficiency, economic development and environmental quality.

The percentage of rice acres scouted for pests by a professional increased dramatically from 11 percent in 1999 to 40 percent in 2006. This increase in pest management decisions based on weekly pest surveys resulted in less wasteful use of all agriculture chemicals and an increase in yield.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
205	Plant Management Systems

#### Outcome #4

##### 1. Outcome Measures

Crop producers will learn economic impact of improved planting procedures.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

#### Outcome #5

##### 1. Outcome Measures

Crop producers will learn proper irrigation management.

##### 2. Associated Institution Types

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Steep increases in fuel costs have increased the number of Missouri irrigators interested in exploring alternatives to reduce fuel use but also apply water in a timely manner.

**What has been done**

Irrigation conferences and meetings throughout the Missouri delta provided valuable information to local irrigators on irrigation scheduling. The information has been posted to the web and is also available to irrigators throughout the country.

**Results**

Irrigation scheduling improves yields for corn by about 11 bushels per acre, for soybeans by about 5 bushels per acre, and for cotton by about 170 pounds per acre. The Woodruff charts and real-time weather data are available for use by producers. It is estimated scheduling increases gross profits of irrigators in Missouri by \$10 million a year and at the same time reduces their fuel costs.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

**Outcome #6****1. Outcome Measures**

Crop producers will learn how management choices in one area affect appropriate choices in other areas.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
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**Outcome #7****1. Outcome Measures**

Corn, soybean, wheat, sorghum, and cotton acreage under conservation tillage will increase. (Source: Conservation Technology Information Service)

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Leaving crop residues on the soil surface is the best means of reducing soil erosion. Soil particles are the most common water pollutant. Soil leaving fields reduces productivity and costs farmers loss of nutrients.

**What has been done**

Conservation tillage remains a primary focus across all disciplines in Plant Sciences Extension. Integrated approaches to pest and crop management were discussed in the Integrated Pest and Crop Management Newsletter and in winter meetings and clinics for crop advisers. One source of information is the long-term tillage versus no-tillage experiment now in its 15th year.

**Results**

Little change in the percentage of crop acreage planted with conservation tillage was estimated in 2007, although several grain crops expanded total planted acreage. Current estimates for conservation tillage acreage for Missouri crops are corn (37%), soybean (61%), grain sorghum (31%) and wheat (52%). Adding reduced tillage acreage to the totals increases these percentages to corn (67%), soybean (77%), grain sorghum (50%) and wheat (72%).

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
205	Plant Management Systems

**Outcome #8****1. Outcome Measures**

The percentage of soybean acreage planted in a properly developed crop rotation will increase. (Source: USDA/ERS)

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

**Outcome #9****1. Outcome Measures**

Seeding rates, average row width, and planting dates will be monitored.  
(Source: Missouri Agricultural Statistics Service and USDA/ERS)

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #10**

**1. Outcome Measures**

Average yields and production efficiencies will increase. (Source: Missouri Agricultural Statistics Service and USDA/ERS)

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Crop yields and production efficiencies are the primary driver for economic development and well-being of many rural communities. Efficient crop production also benefits the environment because costly inputs are not wasted.

**What has been done**

Integrated approaches to crop management were discussed in the Integrated Pest and Crop Management Newsletter and in winter meetings and clinics for crop advisers.

One example is the use of precise application of nitrogen to corn. MU Extension specialists pioneered development and use of on-the-go-nitrogen sensors. Feasibility data were collected in fields throughout Missouri.

**Results**

Results from feasibility studies are promising and indicate nitrogen application rates could be decreased in parts of fields. This results in savings for farmers and a reduced impact from corn production on the environment. NRCS is piloting a cost-share program in Missouri using MU-developed technology.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
104	Protect Soil from Harmful Effects of Natural Elements
102	Soil, Plant, Water, Nutrient Relationships
205	Plant Management Systems

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

**Brief Explanation****V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study

## Evaluation Results

### Key Items of Evaluation

**Program #6****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Missouri Master Wildlifer

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
131	Alternative Uses of Land	5%			
135	Aquatic and Terrestrial Wildlife	90%			
605	Natural Resource and Environmental Economics	5%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	1.0	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
63400	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Develop curriculum-based Missouri Master Wildlifer Program Reference Manual, presentations and support materials, including assessment and evaluation tools, marketing strategies and promotional materials. Provide in-service training (ISE) for regional natural resource program coordinators. Collaborate with various "conservation partners" in the delivery of the short course. These partners might include natural resource professionals with the MDC, NRCS, Soil and Water Conservation Districts and volunteers selected from various nonprofit conservation organizations (such as Conservation Federation of Missouri, Quail Unlimited, Wild Turkey Federation, Ducks Unlimited, Isaac Walton League).

**2. Brief description of the target audience**

The short course is designed for citizens and private landowners interested in integrating wildlife considerations into their current land use and management activities.



**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	160	320	0	0
2007	155	7	0	0

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

**Year      Target**  
**Plan:**    0  
 2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Provide one training session for Extension specialists at the annual statewide Extension meeting. This will include Missouri W

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	1

**Output #2****Output Measure**

- Provide one annual in-service training (ISE) session for regional natural resource program coordinators. This will include Miss

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	0

**Output #3****Output Measure**

- Coordinate delivery of a growing number of short courses to private landowners at selected locations across Missouri.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	8	12

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	50 percent of participants will increase their knowledge of wildlife ecological principles.
2	50 percent of participants will increase their knowledge of habitat assessment techniques.
3	50 percent of participants will increase their knowledge of benefits of improved wildlife habitat.
4	50 percent of participants will increase their knowledge of wildlife habitat improvement practices.
5	50 percent of participants will increase their knowledge of various technical assistance, professional services and resources available to achieve their wildlife management objectives through the MDC, NRCS, and private wildlife and land management consult
6	30 percent of participants will engage in at least one wildlife habitat improvement practice after six months.
7	30 percent of participants will improve their capability to manage the wildlife resource on their property and, as a result, their potential for achieving ecological, economic and social benefits.
8	50 percent of participants will increase the economic value of their property by integrating management practices that enhance wildlife habitat with ongoing agricultural, forestry, recreational or related natural resource enterprises.
9	50 percent of MU Extension and conservation partner teams collaborate in the development of additional Missouri Master Wildlifer or wildlife-related programming to meet the educational needs of private landowners and other audiences within the community
10	50 percent of participants completing wildlife habitat improvement practices will see a corresponding increase in the population of target species.

**Outcome #1****1. Outcome Measures**

50 percent of participants will increase their knowledge of wildlife ecological principles.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Ninety-three percent of Missouri's land base and resulting wildlife habitat is dependent on decisions made by private landowners. Understanding basic ecological concepts and the biology of selected wildlife species is central to the success of implementing habitat management techniques.

**What has been done**

A Master Wildlifer Program was developed to provide landowners with information on the biology and management of wildlife habitat on their property.

**Results**

Participants gained knowledge of basic ecological concepts and principles and were able to apply that knowledge on their property to benefit the wildlife resource and their management objectives.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
131	Alternative Uses of Land
135	Aquatic and Terrestrial Wildlife

**Outcome #2****1. Outcome Measures**

50 percent of participants will increase their knowledge of habitat assessment techniques.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Less than 5 percent of Missouri landowners actively manage their property for wildlife. An increased number of landowners are in need of information to enhance habitats for wildlife populations and communities of interest.

#### **What has been done**

The Master Wildlifer Program provides knowledge and information on implementing wildlife habitat management techniques on private land.

#### **Results**

Since 2006, over 400 landowners and resource professionals have participated in the Master Wildlifer Program, affecting approximately 50,000 acres. Land management techniques, including use of prescribed fire, disking, timber stand improvements, wetland management and techniques to control invasive species and promote native habitats were learned. Practices were applied to benefit wildlife on their property as a result of this educational program.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
605	Natural Resource and Environmental Economics
131	Alternative Uses of Land
135	Aquatic and Terrestrial Wildlife

### **Outcome #3**

#### **1. Outcome Measures**

50 percent of participants will increase their knowledge of benefits of improved wildlife habitat.

#### **2. Associated Institution Types**

•1862 Extension

#### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Wildlife populations are dependent on the quantity and quality of available habitat for survival and to meet their biological needs.

##### **What has been done**

Master Wildlifer provides knowledge and information about the biology and management for selected wildlife species and ecological communities of interest.

##### **Results**

Participants in the Master Wildlifer Program increased their knowledge of the benefits that result from improved wildlife habitat on their property.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
135	Aquatic and Terrestrial Wildlife
131	Alternative Uses of Land
605	Natural Resource and Environmental Economics

### **Outcome #4**

**1. Outcome Measures**

50 percent of participants will increase their knowledge of wildlife habitat improvement practices.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Landowners with improved knowledge and understanding of wildlife habitat management will adopt active management practices that improve habitats on their property, resulting in a potential increase of habitat to support wildlife populations.

**What has been done**

The Master Wildlifer Program has provided the knowledge and information to an increasing number of landowners that have an interest in implementing practices on their property to improve wildlife habitat.

**Results**

Participants increased their knowledge of wildlife habitat improvement practices as a result of participating in the Master Wildlifer Program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
131	Alternative Uses of Land
135	Aquatic and Terrestrial Wildlife

**Outcome #5****1. Outcome Measures**

50 percent of participants will increase their knowledge of various technical assistance, professional services and resources available to achieve their wildlife management objectives through the MDC, NRCS, and private wildlife and land management consult

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Landowners need additional knowledge of the technical services, incentives and assistance programs available to improve their likelihood of adopting and implementing wildlife management practices on their property.

#### **What has been done**

The Master Wildlifer Program provided information on accessing technical service and assistance programs that offer management assistance to landowners on implementing wildlife management practices on their land.

#### **Results**

Participants improved their knowledge of the technical services that are available for wildlife management assistance.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
135	Aquatic and Terrestrial Wildlife
605	Natural Resource and Environmental Economics

### **Outcome #6**

#### **1. Outcome Measures**

30 percent of participants will engage in at least one wildlife habitat improvement practice after six months.

#### **2. Associated Institution Types**

•1862 Extension

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Growth in the number of landowners who adopt wildlife management practices will result in habitat improvements that benefit wildlife populations and recreational opportunities on private lands in Missouri.

##### **What has been done**

Master Wildlifer provides increased knowledge and information on the management of Missouri's wildlife resource. By improving the understanding of basic wildlife ecological concepts and the biology of wildlife species, habitat improvements can be implemented.

##### **Results**

About 75 percent of the participants indicated they would adopt and implement habitat practices on their property as a result of Master Wildlifer.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
135	Aquatic and Terrestrial Wildlife
131	Alternative Uses of Land

### **Outcome #7**

#### **1. Outcome Measures**

30 percent of participants will improve their capability to manage the wildlife resource on their property and, as a result, their potential for achieving ecological, economic and social benefits.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The need exists to improve the management capabilities of landowners to adopt and implement practices that benefit wildlife on their property and to manage the resource for economic, social and ecological benefits.

**What has been done**

The Master Wildlifer Program increases the knowledge and awareness of landowners on the benefits that result from managing their property for wildlife (ecological, social and economic).

**Results**

Participants indicated their knowledge of the benefits of managing their property for wildlife increased as a result of Master Wildlifer.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
131	Alternative Uses of Land
135	Aquatic and Terrestrial Wildlife
605	Natural Resource and Environmental Economics

**Outcome #8****1. Outcome Measures**

50 percent of participants will increase the economic value of their property by integrating management practices that enhance wildlife habitat with ongoing agricultural, forestry, recreational or related natural resource enterprises.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

About 95 percent of the Missouri Master Wildlifer participants indicated they owned property for agriculture, forestry, recreational or investment goals and objectives. Therefore a need exists to integrate wildlife objectives into ongoing land management objectives to effectively achieve land management goals.

**What has been done**

Master Wildlifer provides information about techniques to improve wildlife habitat and complement ongoing land management objectives.

**Results**

About 75 percent of the participants indicated they planned to integrate wildlife management practices into ongoing land management objectives to increase the economic value of their property and increase the availability of wildlife habitat.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
135	Aquatic and Terrestrial Wildlife
131	Alternative Uses of Land
605	Natural Resource and Environmental Economics

**Outcome #9****1. Outcome Measures**

50 percent of MU Extension and conservation partner teams collaborate in the development of additional Missouri Master Wildlifer or wildlife-related programming to meet the educational needs of private landowners and other audiences within the community

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The Master Wildlife Program is an educational model that provides knowledge and information to a diverse clientele interested in understanding the biology of Missouri's wildlife and implementing wildlife management practices on their property.

**What has been done**

The program was conducted and delivered to 12 MU Extension locations during 2007 in an effort to expand the delivery of the program and make it available to an increasing number of landowners and interested citizens in Missouri.

**Results**

As a result, additional Master Wildlifer Programs were conducted throughout the state to meet the demand.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
131	Alternative Uses of Land
135	Aquatic and Terrestrial Wildlife
605	Natural Resource and Environmental Economics

**Outcome #10****1. Outcome Measures**

50 percent of participants completing wildlife habitat improvement practices will see a corresponding increase in the population of target species.



**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	24	12

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

One objective of conducting management is to enhance the carrying capacity of the habitat to support an increasing population of wildlife.

**What has been done**

The Master Wildlifer Program provided information to increase participants' knowledge about adopting management practices that potentially increase the population of the wildlife species or community of interest.

**Results**

About 40 percent of the participants observed an increase of various wildlife populations as a result of conducting management on their property.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
131	Alternative Uses of Land
135	Aquatic and Terrestrial Wildlife

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes

**Brief Explanation**

The Missouri Master Wildlifer Program uses the distance education technology of Interactive TV and the Centra videoconferencing system to deliver the program. However, the technology allows for a maximum of 10 locations to participate in the LIVE program. This limits the number of clientele that can participate in the live events. However, through the use of Centra, clientele have been able to participate in the program on a delayed basis. Use of new distance education technology has the potential to increase the scope of this program.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- Before-After (before and after program)

**Evaluation Results**

To evaluate the program, participants voluntarily provided responses to a 34-question pre- and post-course assessment, developed to determine if knowledge of ecological and wildlife management concepts improved. Questions were grouped into eight Ecological Concept Areas (corresponding to the subject matter taught during each session) to facilitate the analysis of responses, which used paired sample statistics. Using a Likert scale (1-5), mean responses of the learners perceived “current level of knowledge” (2.16) and perceived “level of knowledge gained” (3.99) indicated that a significant increase in knowledge scores resulted. A 6-month follow-up evaluation was also conducted to assess whether management practices were adopted. Over 95 percent of the learners gained knowledge and skills enabling them to implement ecologically sound management practices for wildlife benefits on their property. As a result of these impacts, the Missouri Master Wildlifer Program provides an effective educational model for delivering science-based information featuring ecological and wildlife management concepts to adult learners.

#### **Key Items of Evaluation**

Biology and management of bobwhite quail and grassland birds in prairie communities; biology and management of white-tailed deer and forest wildlife management; biology and management of wild turkey; biology and management of Missouri's furbearers and wildlife damage management; Missouri's aquatic resources: streams, lakes and ponds; Managing to improve biological diversity on your property; Prevention and control of invasive species on your property; Wildlife habitat management techniques.

**Program #7****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Missouri Woodland Steward

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
123	Management and Sustainability of Forest Resources	45%			
131	Alternative Uses of Land	5%			
135	Aquatic and Terrestrial Wildlife	45%			
605	Natural Resource and Environmental Economics	5%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	2.0	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
126800	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Develop a curriculum-based DVD product containing indoor session presentations and support materials, including assessment and evaluation tools, marketing strategies and promotional materials. Provide in-service training (ISE) for regional natural resource program coordinators. Partner with Missouri Department of Conservation resource foresters and private land conservationists in the delivery of the short course.

**2. Brief description of the target audience**

The target audience is resident and absentee landowners who own 10 acres or more and are interested in improving the natural resource base of their property.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	300	600	0	0
2007	275	15	0	0

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

**Year      Target**  
**Plan:**    0  
 2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Provide one training session for Extension specialists at the annual statewide Extension meeting. This will include Missouri Ma

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	0

**Output #2****Output Measure**

- Provide one annual in-service training (ISE) session for regional natural resource program coordinators. This will include Miss

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	0

**Output #3****Output Measure**

- Coordinate delivery of at least 15 short courses to private landowners at selected locations across Missouri.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	15	14

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	50 percent of participants will increase their knowledge of forest ecology.
2	50 percent of participants will increase their knowledge of forest management.
3	50 percent of participants will increase their knowledge of wildlife ecological principles.
4	50 percent of participants will increase their knowledge of wildlife habitat improvement practices.
5	50 percent of participants will contact a natural resource professional for follow-up consultation.
6	30 percent of participants will have a management plan in place after six months.
7	30 percent of participants will have engaged in at least one forest improvement practice after six months.
8	30 percent of participants will have engaged in at least one wildlife habitat improvement practice after six months.
9	50 percent of participants who complete crop tree release will see increased forest growth.
10	50 percent of participants who complete wildlife habitat improvement practices for a targeted species will see increased numbers of those species.
11	50 percent of participants who complete forest or wildlife habitat improvement practices will see a corresponding increase in the population of target species.

**Outcome #1****1. Outcome Measures**

50 percent of participants will increase their knowledge of forest ecology.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	275

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Natural resource managers want their clients (i.e., landowners) to take ownership for the management of their woodlands. For that to happen, the client needs to have a basic understanding of plant growth as it relates to both the individual tree and the larger forest stand.

**What has been done**

Short course was delivered across 14 sites to 275 private landowners.

**Results**

Impact was assessed by observing a 1.5-point increase in pre- and post-course self-evaluations (Likert scale 1-5).

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #2****1. Outcome Measures**

50 percent of participants will increase their knowledge of forest management.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	275

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Natural resource managers want their clients (i.e., landowners) to take ownership in the management of their woodlands. Not only do landowners need to understand basic forest ecology principles, but they must also have a basic knowledge of simple forest management principles and practices in order to communicate effectively with their resource professionals.

**What has been done**

Short course was delivered across 14 sites to 275 private landowners.

**Results**

Impact was assessed by observing a 2-point increase in pre- and post-course self-evaluations (Likert scale 1-5).

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #3****1. Outcome Measures**

50 percent of participants will increase their knowledge of wildlife ecological principles.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	275

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Natural resource managers want their clients (i.e., landowners) to take ownership in the management of their woodlands and for that to happen the client needs to have a basic understanding of wildlife ecological principles.

**What has been done**

Short course was delivered across 14 sites to 275 private landowners.

**Results**

Impact was assessed by observing a 1.3 point increase in pre- and post-course self-evaluations (Likert scale 1-5).

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

**Outcome #4****1. Outcome Measures**

50 percent of participants will increase their knowledge of wildlife habitat improvement practices.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	275

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Natural resource managers want their clients (i.e., landowners) to take ownership in the management of their woodlands. Not only do landowners need to understand basic wildlife ecological principles, but they must also have a basic knowledge of simple wildlife management principles and practices in order to communicate effectively with their resource professionals.

**What has been done**

Short course was delivered across 14 sites to 275 private landowners.

**Results**

Impact was assessed by observing a 1.8 point increase in pre- and post-course self-evaluations (Likert scale 1-5).

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

**Outcome #5****1. Outcome Measures**

50 percent of participants will contact a natural resource professional for follow-up consultation.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	275

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Natural resource managers want their clients (i.e., landowners) to be motivated and comfortable with contacting them.

**What has been done**

Short course was delivered across 14 sites to 275 private landowners.

**Results**

Impact was assessed by observing the results of the six-month, follow-up survey. Of the 275 participants, 220 indicated they had contacted a local forester.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife
131	Alternative Uses of Land
605	Natural Resource and Environmental Economics
123	Management and Sustainability of Forest Resources

**Outcome #6****1. Outcome Measures**

30 percent of participants will have a management plan in place after six months.



**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	275

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Natural resource managers want their clients (i.e., landowners) to implement the management plan that is developed and not let it rest on a shelf or in a filing cabinet.

**What has been done**

Short course was delivered across 14 sites to 275 private landowners.

**Results**

Of the 220 participants who contacted their local forester or private land conservationist, only 138 were actually able to receive assistance. The most frequent reason given for not servicing a landowner request was the professional did not have the time.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #7****1. Outcome Measures**

30 percent of participants will have engaged in at least one forest improvement practice after six months.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	220

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri's woodlands need attention now, not when we can "fit it into our schedules." Healthy forests tomorrow require action today.

**What has been done**

Short course was delivered across 14 sites to 275 private landowners.

**Results**

Impact was assessed by the fact 200 landowners (62 of whom did not have the luxury of a forester's input) performed crop tree release (Crop tree release is the process of reallocating sunlight, water and nutrients to a designated crop tree from neighboring, competing trees. The crop tree can be any tree that meets the woodland owner's objective[s]; be it a timber tree, an acorn-producing tree for wildlife, or a colorful maple for fall foliage.) on 10,000 acres. The projected measurable economic impact from the Woodland Steward Program is an increased net present value of \$8.9 million (\$885/acre) over the option of no forest management.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

### Outcome #8

#### 1. Outcome Measures

30 percent of participants will have engaged in at least one wildlife habitat improvement practice after six months.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	138

#### 3c. Qualitative Outcome or Impact Statement

##### Issue (Who cares and Why)

Missouri's woodlands and wildlife habitats need attention now, not when we can "fit it into our schedules." Healthy forests tomorrow require action today.

##### What has been done

Short course was delivered across 14 sites to 275 private landowners.

##### Results

Impact was assessed by the fact 150 landowners (52 of whom did not have the luxury of a forester's input) performed crop tree release (Crop tree release is the process of reallocating sunlight, water and nutrients to a designated crop tree from neighboring, competing trees. The crop tree can be any tree that meets the woodland owner's objective[s]; be it a timber tree, an acorn-producing tree for wildlife, or a colorful maple for fall foliage.) on 7,000 acres and edge feathering on an additional 1,100 acres. The projected measurable economic impact is an increased net present value of \$3.1 million (\$890/acre) on the 3,500 acres managed for combined timber and wildlife production, and \$0.4 million (\$100/acre) on the 4,500 acres that will be managed for only wildlife benefits.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

### Outcome #9

#### 1. Outcome Measures

50 percent of participants who complete crop tree release will see increased forest growth.

#### 2. Associated Institution Types

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	200

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #10****1. Outcome Measures**

50 percent of participants who complete wildlife habitat improvement practices for a targeted species will see increased numbers of those species.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	210

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Landowners care because they are interested in seeing the results of their planning and labor.

**What has been done**

It has been only one year since the management practice was employed, so it is too early to assess condition change.

**Results**

It has been only one year since the management practice was employed, so it is too early to assess condition change.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #11**

**1. Outcome Measures**

50 percent of participants who complete forest or wildlife habitat improvement practices will see a corresponding increase in the population of target species.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	45	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes

**Brief Explanation**

Severe ice storms in southwest and east-central Missouri focused some participants' attention to salvage and clean-up operations rather than management of their forest stands and wildlife habitats. But more important is the lack of resource professionals to meet the demand. Too often it has not been unwillingness of the forester or land conservationist to meet with a landowner that has prevented implementation of management practices; it has simply come down to not enough hours in the day and days in the week.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- Before-After (before and after program)
- Time series (multiple points before and after program)

**Evaluation Results**

Program presenters will continue to conduct pre- and post-course self-evaluations (Likert scale 1-5) to monitor knowledge gained and six-month follow-up surveys to monitor management actions enacted. Longer-term impacts such as increased forest growth or the increase in target wildlife species will be monitored by meeting with participants at future field days and landowner conferences.

**Key Items of Evaluation**

Six-month follow-up surveys show 10,000 acres have been placed under management (50% of the total potential reached through the program). The main reason cited for more acreage not being placed under management was the long wait time for a professional forester to visit the tract and prepare the management plan.

- Liquidate forest now NPV = \$720/acre
- Do not manage the forest and harvest in 40 years NPV = \$94/acre
- Manage the forest NPV = \$979/acre

Page 85 of 358

**Program #8****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Pasture Based Dairy Systems

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
205	Plant Management Systems	20%			
301	Reproductive Performance of Animals	10%			
302	Nutrient Utilization in Animals	10%			
303	Genetic Improvement of Animals	10%			
307	Animal Management Systems	20%			
315	Animal Welfare/Well-Being and Protection	10%			
601	Economics of Agricultural Production and Farm Management	10%			
801	Individual and Family Resource Management	10%			
<b>Total</b>		100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	4.0	0.0	0.0	0.0
<b>Actual</b>	4.6	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b> 291639	<b>1890 Extension</b> 0	<b>Hatch</b> 0	<b>Evans-Allen</b> 0
<b>1862 Matching</b> 0	<b>1890 Matching</b> 0	<b>1862 Matching</b> 0	<b>1890 Matching</b> 0
<b>1862 All Other</b> 0	<b>1890 All Other</b> 0	<b>1862 All Other</b> 0	<b>1890 All Other</b> 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Extension specialists will teach "expert producers" who in turn will teach other producers. Methods will include monthly meetings, newsletters, pasture walks, helping producers learn how to use the web (A webpage has already been established from the ODF project.), provide annual Ag. Lenders workshop, establish forage demonstration plots, and hold annual dairy grazing symposium at the University of Missouri Agricultural Experiment Station in Mt. Vernon, Missouri, which has an established grass-based dairy research and demonstration program.

**2. Brief description of the target audience**

Young families seeking a livelihood in agriculture and to live in the rural areas of Missouri. Existing dairy producers who seek a less stressful farm management lifestyle. Foreign investors who seek to establish profitable investments as grass-based dairies in Missouri.

**V(E). Planned Program (Outputs)****1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	150	200	600	50
2007	418	1023	650	80

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

Year      Target

Plan:     0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan			
2007	0	0	0

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Provide three in-service training sessions for regional Extension specialists on an annual basis.

Year	Target	Actual
2007	3	3

**Output #2****Output Measure**

- Develop or revise three guide sheets a year for regional Extension specialists to use in producer meetings.

Year	Target	Actual
2007	3	4

**Output #3****Output Measure**

- Revise the pasture-based dairy manual on a semiannual basis for regional Extension specialists to use in producer meetings.

Year	Target	Actual
2007	0	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Number of clientele gaining knowledge about forage management.
2	Number of clientele gaining knowledge of grazing systems management.
3	Number of dairy farms producing milk for less than \$10.50/cwt.
4	Increase the number of dairy grazing farms in Missouri.
5	Profitability of existing MiG dairies.
6	Quality of life as expressed by family farm operators.



**Outcome #1****1. Outcome Measures**

Number of clientele gaining knowledge about forage management.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	500

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

One of the most challenging aspects of management-intensive grazing on a dairy farm is monitoring and measuring forages in the total system. Grazing dairy operations need to consistently measure forage available from the grazing system and to maximize use of this high-quality, low-cost feedstuff to enhance economic returns.

**What has been done**

University of Missouri Extension has developed an online grazing wedge calculator that is free to any user. The calculator enables participants to input their paddock measurements to monitor daily dry matter growth and visually evaluate dry matter availability in each of the paddocks. This data is summarized over the growing season, and the producer can also include other key indicators of forage and grazing management.

**Results**

Dairy producers identify optimal forages and management practices for optimum profitability and sustainability of their dairy operation. To date, 15 producers are entering farm data into the calculator on a weekly basis and using this information to manage the forage on their farms.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #2****1. Outcome Measures**

Number of clientele gaining knowledge of grazing systems management.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	400

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Declining profits of traditional dairy operations have increased the demand for systems that can maintain profitability of the family-sized dairy operation. Economic data has been collected since 1998 from pasture-based operations that clearly demonstrate the profitability of this dairy system. Success in this type of operation requires an understanding of not only the scientific aspects, but also the art of effectively managing pasture-based systems.

#### **What has been done**

University of Missouri Extension has conducted classroom and on-farm workshops to increase knowledge and understanding of grazing systems management. Expert producers participating in the program also serve as mentors to newly established pasture-based dairy systems to assist them in the process.

#### **Results**

Understanding of grazing systems management increases rapidly after the first year of establishing the system. Forage utilization will be approximately 50 percent the first year, but will increase to almost 70 percent after the second year. This increase in utilization will significantly decrease the demand for supplemental feeding and increases profitability.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems
307	Animal Management Systems

#### **Outcome #3**

##### **1. Outcome Measures**

Number of dairy farms producing milk for less than \$10.50/cwt.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	5

##### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The key to Missouri's dairy future is optimizing use of the forage base to reduce feed costs. During the past several years, dairy producers have experienced large variations in milk price. The average price received was \$13.25 per hundredweight in 2006 and approximately \$19.45 in 2007. At the same time, input costs for items such as feed, labor, machinery and supplies have continued to increase. High input costs have affected profit margins and forced many dairy producers to explore alternative management strategies to remain competitive.

#### **What has been done**

Comparison of the operating margins of Missouri dairy grazers and the MU Southwest Research Center dairy with those of the large conventional dairies clearly demonstrates that smaller dairies can compete on a per cow basis. Grazers continue to maintain strong control over production costs. Obviously there is ample opportunity for Missouri grazers to lower their costs when their data is compared with that from Wisconsin.

#### **Results**

Rapidly escalating input costs have affected not only pasture-based dairy operations but also the large conventional operations. Even with this factor, pasture-based operations are still producing milk for almost \$3.00 less per hundredweight than the other type of operations. Grazers have worked to increase forage utilization and are more accurately timing fertilizer applications.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
601	Economics of Agricultural Production and Farm Management
307	Animal Management Systems

**Outcome #4****1. Outcome Measures**

Increase the number of dairy grazing farms in Missouri.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	3

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Declining profit margins have forced hundreds of dairies out of business in Missouri and across the southeastern United States. Missouri's dairy industry remains a critical component of the state's total agricultural economy. Missouri's dairy farmers earned \$298 million in cash receipts from milk sales in 2005.

**What has been done**

In the early 1990s, University of Missouri Extension initiated the pasture-based dairy project and dairies began using new intensive rotational grazing technologies to improve profit margins and reduce barriers to entry and growth.

**Results**

By the end of 2008, expansion and growth already planned by these new grazing dairies is expected to increase the total new investment to \$63 million, generating \$28 million in annual milk sales, adding \$87 million in total output and 777 additional jobs in the state of Missouri.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
601	Economics of Agricultural Production and Farm Management

**Outcome #5****1. Outcome Measures**

Profitability of existing MiG dairies.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	18

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

A pasture-based dairy must be not only profitable but also sustainable. An important component of this process is to collect and analyze economic data from the dairy operation. This provides a tool to evaluate current management and identifies areas needing modification to enhance profitability.

**What has been done**

Economic data has been collected from participants in the pasture-based dairy project and the University of Missouri Southwest Research Center dairy on an annual basis.

**Results**

University of Missouri Extension dairy specialists have used financial data from grazing peer groups to develop forms, spreadsheets and publications for producers and lenders to project yearly cash flows, balance sheets and income statements.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

**Outcome #6****1. Outcome Measures**

Quality of life as expressed by family farm operators.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	23

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Data collected from farm families and others in rural communities indicate the mental health problems associated with farm failures lead to increased physical illness, family and animal abuse, divorce and suicide. The social and psychological problems extend to others associated with agribusinesses in the community. Many communities begin to display social symptoms similar to the psychological problems displayed by farm families.

**What has been done**

Aspects of pasture-based dairy production have been demonstrated to clientele and other extension specialists.

**Results**

Sociological and environmental aspects of pasture-based dairying provide a less stressful way of life than conventional dairy production. Operators have reported a reduced amount of time spent managing their dairy and more time available to spend with their families.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

#### V(H). Planned Program (External Factors)

##### External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Attitude)

##### Brief Explanation

The key factor affecting the profitability of a pasture-based dairy operation relates to the environment, particularly drought. Typically, in these types of operations pasture forages furnish 70-100 percent of the daily dry matter intake required. During 2006 a prolonged drought significantly increased the demand for supplementation and resulted in a reduction of operating margins by over \$400 per dairy animal. However, in 2007 grazers gained more than 40 additional grazing days due to abundant rainfall. Other key factors relate to input costs and prices received for product. Milk price is not a static value, but is affected by both U.S. and global production. Similarly, even though supplemental feed costs are minimal in a pasture-based system, current wide variations in these costs can have a major impact on profitability, particularly when adverse environmental factors are included.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

##### Evaluation Results

Interest and expansion in pasture-based dairies continue to increase. During 2008, ten new dairy operations are either under construction or in the planning process. The size of these operations will be between 100 and 500 cows. It is expected that there will be an additional 4,000-5,000 cows in the state by the end of the year. In addition, five individuals are currently evaluating the feasibility of establishing a pasture-based dairy. Surveys and observations evaluate whether the objectives of the project are being met.

##### Key Items of Evaluation

Economic data collection and analysis, profitability of pasture-based systems, increased knowledge of system, number of new dairy operations and surveys.

**Program #9****V(A). Planned Program (Summary)****1. Name of the Planned Program**

MO-PORK: Increasing Pork Production in Missouri

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	30%			
302	Nutrient Utilization in Animals	40%			
303	Genetic Improvement of Animals	5%			
305	Animal Physiological Processes	2%			
306	Environmental Stress in Animals	3%			
307	Animal Management Systems	15%			
308	Improved Animal Products (Before Harvest)	3%			
315	Animal Welfare/Well-Being and Protection	2%			
<b>Total</b>		100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	8.0	0.0	0.0	0.0
<b>Actual</b>	4.0	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b> 253599	<b>1890 Extension</b> 0	<b>Hatch</b> 0	<b>Evans-Allen</b> 0
<b>1862 Matching</b> 0	<b>1890 Matching</b> 0	<b>1862 Matching</b> 0	<b>1890 Matching</b> 0
<b>1862 All Other</b> 0	<b>1890 All Other</b> 0	<b>1862 All Other</b> 0	<b>1890 All Other</b> 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

The MO-Pork program will include the following activities: Promotion of efficient production and management practices (Pork Industry Handbook, MU guide sheets and Midwest Plan Service Handbooks); Use of Manual 144/202 "The Missouri System of Swine Production"; On-farm data collection used to evaluate production and economic endpoints; Focused Management Schools for MO-Pork participants, artificial insemination course, Back to the Basics: Farrowing School, Sow Manager's Conference, Pigs to Plate: Adventures in Meat Quality Seminar, Health Summit, finishing short course, nursery management course, ventilation short course; Delivery of Pork Quality Assurance Program for MO-Pork participants; Delivery of new technologies in the swine industry to MO-Pork participants; Computer models/PDA record keeping programs; World Pork Expo and other conferences; Education about niche production markets and specialization opportunities; Media coverage of the MO-Pork program; Farm visits; On-farm research trials; Workshops; Meetings; and Consultation.

## 2. Brief description of the target audience

The target audience will include people who own swine operations, work on swine farms, or provide technical support to people who own or work on swine farms (e.g., veterinarians, feed dealers). In addition, MO-Pork will target beginning Missouri pork producers, expanding Missouri pork producers, and industry personnel such as Missouri grain producers (interested in adding value to their crops).

## V(E). Planned Program (Outputs)

### 1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	750	1500	300	0
2007	738	2107	335	1565

### 2. Number of Patent Applications Submitted (Standard Research Output)

#### Patent Applications Submitted

Year      Target

Plan:     0

2007 :    0

#### Patents listed

### 3. Publications (Standard General Output Measure)

#### Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

## V(F). State Defined Outputs

### Output Target

**Output #1****Output Measure**

- Provide two in-service training sessions for regional Extension specialists on an annual basis.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2	3

**Output #2****Output Measure**

- Develop or revise five guide sheets on an annual basis for regional Extension specialists to use in producer meetings.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	3

**Output #3****Output Measure**

- Develop or revise 1 manual on an annual basis for regional Extension specialists to use in producer meetings.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	1



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Participants will maintain or increase pork production efficiencies and profitability in Missouri.
2	Participants will have improved economic viability and profitability through enhanced marketing opportunities for their operation.
3	Participants will maintain or increase pork operations in Missouri.
4	Participants will acquire knowledge and skills to aid in the successful adoption and implementation of existing management practices or emerging technology to improve pork production efficiency and productivity.
5	Participants will be able to identify and discuss the economic implications of implementing production practices such as marketing/contracting opportunities.

**Outcome #1****1. Outcome Measures**

Participants will maintain or increase pork production efficiencies and profitability in Missouri.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Margins continue to tighten for pork producers. Efficiency can be increased by reducing inputs (of which feed is the single greatest expense) or increasing outputs (either reproductive output or growth).

**What has been done**

Reducing inputs through purchasing contracts, feed budgets, diet analysis, feeder design, feed manufacturing quality, ingredient selection and feed analysis are a few of the educational topics presented to more than 200 pork producers in Missouri. Twelve one-on-one consultations were conducted to evaluate farm specific feeding management issues and storage when feeding alternative ingredients to swine.

**Results**

Average litter size weaned continues to increase. It is estimated that pigs per sow per year increased by 1.3 pigs for those participating in two or more MU Extension short courses (about a 5 percent increase). In addition, with high corn and soybean meal prices, the implementation of feed budgets, usage of alternative grains and diet analysis resulted in an estimated feed savings of more than \$4.00 per pig marketed.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals

**Outcome #2****1. Outcome Measures**

Participants will have improved economic viability and profitability through enhanced marketing opportunities for their operation.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

To sell to any of the major packers, producers are required to be certified through the National Pork Board's Pork Quality Assurance (PQA) program. After 10 years of that requirement, in 2007 the PQA Plus program was launched and is replacing PQA Level III. PQA Plus includes an animal welfare component in addition to the food safety focus and those who certify producers in PQA Plus must take a 4-hour training course and pass an examination.

**What has been done**

Several state and county-level programs were held discussing feeding alternative ingredients to swine. As part of this program we have trained 77 PQA Plus Advisors (who can now train and certify producers) as well as certified 34 individuals directly. This has resulted in more than 600 pork producers in Missouri becoming PQA Plus certified in 2007.

**Results**

Data on number of producers certified by each PQA Plus Advisor are being collected currently. This certification is required for market access as certification in the old PQA program expires, so within three years all producers will go through this new program.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
308	Improved Animal Products (Before Harvest)
306	Environmental Stress in Animals
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
305	Animal Physiological Processes

**Outcome #3****1. Outcome Measures**

Participants will maintain or increase pork operations in Missouri.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Pork producers in Missouri must have the ability to maintain a competitive infrastructure as the number of pig farms has experienced a continuous decline nationally. Missouri's number one industry is agriculture, and it is important that pork producers be allowed to use the competitive advantages this state offers for pork production.

**What has been done**

The three day Swine Institute (held in November) was started to bring nationally recognized speakers into Missouri to discuss market access and industry issues such as: Increasing efficiency of feed conversion leads to reduced environmental impact and may reduce odor.

**Results**

More than 50 people representing over half of the sow production in Missouri attended the Swine Institute, where producers gained an increased understanding of possible impacts on the future of swine production. Working with partners has led to increased feed efficiency, tree plantings on seven farms to diffuse odors (web site was created to support this effort), and media relations to discuss the importance of livestock production in general.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
301	Reproductive Performance of Animals
305	Animal Physiological Processes
307	Animal Management Systems

**Outcome #4****1. Outcome Measures**

Participants will acquire knowledge and skills to aid in the successful adoption and implementation of existing management practices or emerging technology to improve pork production efficiency and productivity.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The swine industry has been very dynamic and competitive through the beginning of this century. This industry has embraced change, and those producers who have resisted change have seen the industry pass them by. Most who are resistant to change have exited the industry.

**What has been done**

MU Extension has held 23 seminars and short courses such as the Farrowing School, Pork Quality Assurance, Growth and Quality Barrow Classic, and Pork Profit Seminars. Of course on-farm visits have also been used, especially in demonstration research efforts. Countless telephone and e-mail consultations have also been part of this effort. In addition, a spreadsheet was developed to assist pork producers in evaluating the economic impact of feeding distillers dried grains co-product from the ethanol industry.

**Results**

Providing educational presentations at least twice a year and updating the swine feeding programs yearly for the Show-Me Buying Cooperative, a group of about 60 independent pork producers, has resulted in a huge economic advantage. This program has enabled independent swine producers to buy feed ingredients at the same competitive and bulk rate prices as large corporate operations, which has saved 30 to 40 percent in total feed costs depending on the ingredients purchased and past sources. For example, vitamin premix prices dropped from \$0.80 to \$0.50 per pound and Phase 1 nursery diet prices have been decreasing from \$480 to \$325 per ton based on formulation evaluation or ingredient acquisition.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)

**Outcome #5**

**1. Outcome Measures**

Participants will be able to identify and discuss the economic implications of implementing production practices such as marketing/contracting opportunities.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The swine industry has been very dynamic and competitive through the beginning of this century. This industry has embraced change, and those producers who have resisted change have seen the industry pass them by. Most who are resistant to change have exited the industry.

**What has been done**

MU Extension has held 23 seminars and short courses such as the Farrowing School, Pork Quality Assurance, Growth and Quality Barrow Classic, and Pork Profit Seminars. In addition, a spreadsheet was developed to assist pork producers in evaluating the economic impact of feeding distillers dried grains co-product from the ethanol industry.

**Results**

Providing educational presentations at least twice a year and updating the swine feeding programs yearly for the Sho-Me Buying Cooperative, a group of about 60 independent pork producers, has resulted in a huge economic advantage. This program has enabled independent swine producers to buy feed ingredients at the same competitive and bulk rate prices as large corporate operations, which has saved 30 to 40 percent in total feed costs depending on the ingredients purchased and past sources. For example, vitamin premix prices dropped from \$0.80 to \$0.50 per pound and Phase 1 nursery diet prices have been decreasing from \$480 to \$325 per ton based on formulation evaluation or ingredient acquisition.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
307	Animal Management Systems
302	Nutrient Utilization in Animals
301	Reproductive Performance of Animals

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

**Brief Explanation**

No information found.

## V(I). Planned Program (Evaluation Studies and Data Collection)

### 1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

### Evaluation Results

External factors played a significant role in Missouri swine production in 2007. Continued efforts to subsidize ethanol production from corn have ended the profitability of pork production. Lack of adequate support to implement larger programs has limited some potential efforts.

In general, pork producers are paid by the pound and by other measures of quality, most with a large genetic component. Economic models have shown repeatedly that increasing reproductive performance, measured as litter size weaned, will have the most profound economic impact among production traits. Use of artificial insemination (AI) has increased from less than 25 percent to more than 85 percent in the past 10 years. This, coupled with tighter profit margins, has led producers to provide much higher levels of management to the farms. In most cases, boars are housed in separate facilities where they can be provided the optimal management, but there is little data to identify optimal management of boars. AI systems allow a single boar to be used in mating 10 to 20 times as many sows as is possible with natural service. This allows the use of superior boars, but also means that inadequate identification of merit will result in the more widespread use of inferior boars. Another economic measurement is feed efficiency, as feed cost represents about 70 percent of the total cost of pork production. Any feed management practice that will improve growth performance and feed efficiency enhances the bottom line for pork producers' profit margins. Other pork production issues of importance to producers are ensuring quality food product; product safety from agroterrorism; prevention of disease outbreaks; antibiotic feeding concentrations; neighborhood acceptance of swine operations; health of employees, owners, pigs or public; labor shortage; and lack of quality and skills of labor. Therefore, producers need to continually be educated and challenged to adopt new technologies. Otherwise, they may opt to leave the pork production industry due to the increasing costs of environmental regulations, limited market access and the smaller profit margins.

### Key Items of Evaluation

Exit surveys are conducted with participants at the conclusion of conferences, seminars and programs, as well as many follow-up farm visits and phone conversations. These evaluations indicate more than 95 percent of the pork producers in attendance at a conference, seminar or program have adopted new technology or changed their production practices based on what they learned.

**Program #10****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Plant Protection for the 21st Century

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
211	Insects, Mites, and Other Arthropods Affecting Plants	15%			
212	Pathogens and Nematodes Affecting Plants	15%			
213	Weeds Affecting Plants	15%			
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	5%			
215	Biological Control of Pests Affecting Plants	10%			
216	Integrated Pest Management Systems	40%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	20.0	0.0	0.0	0.0
<b>Actual</b>	6.0	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c 380399	1890 Extension	Hatch	Evans-Allen
	0	0	0
1862 Matching 0	1890 Matching 0	1862 Matching 0	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Campus and regional faculty members will conduct several regional workshops and short courses in partnership with commodity groups and private industry. Venues include commodity district meetings, soil and crop conferences, Ag Science Week, regional short courses, field days and demonstration projects. A suite of full color print publications related to pest and crop management will be developed, published and revised. Several websites are available for public use. The integrated pest management site also contains interactive information for clientele interested in black cutworm status. Weekly teleconferences among state and regional faculty members will be held during spring, summer and autumn for timely commodity and pest updates. Funding will be provided to regional extension specialists for local demonstrations of integrated pest management practices.

**2. Brief description of the target audience**

The primary target audiences are crop producers and their advisers, and private and commercial pesticide applicators. Programs will be developed for crop producers with a diversity of farm sizes, crops produced, and land resource bases. Crop advisers and service providers are important targets because of their extensive contact with crop producers, which makes them ideal intermediates for passing on Extension programming to a wider range of producers than could be reached by Extension personnel alone. Because the future of Missouri agriculture depends on young professionals replacing retiring farmers and personnel, youth organizations including FFA, 4-H, Young Farmers, and their teachers will receive specially designed programs.

**V(E). Planned Program (Outputs)****1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	3000	5000	1000	0
2007	2700	5974	190	0

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

Year      Target

Plan:     0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**



**Output #1****Output Measure**

- Provide three in-service training sessions for regional Extension specialists on an annual basis.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	2

**Output #2****Output Measure**

- Develop or revise 10 guide sheets on an annual basis for

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	10	9

**Output #3****Output Measure**

- Develop or revise three manuals on an annual basis

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	2

**Output #4****Output Measure**

- Two print and electronic newsletters devoted to pest and crop management will be developed and distributed to regional speci

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	24	24

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Number of IPM educational materials (10 Guides & 3 Manuals) developed or revised either on paper or electronically (source = internal).
2	Number of IPM strategies and systems validated (source = internal).
3	Diversity of IPM practices adopted, including fields scouted for weeds, insects and pathogens (source = USDA/ERS).
4	Acres treated with insecticides, herbicides and fungicides with emphasis on high risk pesticides (source = USDA/ERS)
5	Three thousand (3,000) pesticide applicators will meet the legal need of certification by improving their knowledge of pesticides and their use.
6	Two thousand (2,000) agricultural producers, turfgrass and ornamental professionals and agribusiness personnel will acquire knowledge and skills to aid in the successful adoption and implementation of existing integrated pest management practices.

**Outcome #1****1. Outcome Measures**

Number of IPM educational materials (10 Guides & 3 Manuals) developed or revised either on paper or electronically (source = internal).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10	28

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Printed publications, newsletters and web sites are the best means of reaching a diverse audience. For appropriate pest management decisions, homeowners, farmers, crop advisers and other plant management professionals must have access to the most up-to-date information. The IPM web site is the portal to all electronic and print content related to pest management. This information affects all citizens because use of appropriate pest management practices enhances environmental quality.

**What has been done**

The IPM publication portfolio has increased to 10 agricultural guides and 18 full color manuals. The IPM web site was completely redesigned to improve functionality. Our two newsletters were redesigned to enhance acceptance by readers.

**Results**

More than 57,000 pages were viewed on the IPM web site by 20,000 visitors in 2007. Of these visitors, 71.4% were new visitors. Subscribers to one or both of our newsletters now total 2,422. More than 5,000 purchases of IPM manuals and guides were made in 2007.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
216	Integrated Pest Management Systems

**Outcome #2****1. Outcome Measures**

Number of IPM strategies and systems validated (source = internal).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)****What has been done****Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
216	Integrated Pest Management Systems

**Outcome #3****1. Outcome Measures**

Diversity of IPM practices adopted, including fields scouted for weeds, insects and pathogens (source = USDA/ERS).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Vigilance over new and threatening pests is essential for identification and development of best pest management strategies. Inappropriate application of pesticides harms the environment and reduces profitability.

**What has been done**

Pest monitoring through traps was conducted for seven insect pests. Persons involved in this monitoring program were trained regional extension specialists. A group of trained observers sampled soybean fields throughout Missouri. Leaf samples were sent to a central lab for identification of soybean rust.

**Results**

Counted numbers from pest monitoring were placed in a database that can be viewed through the IPM web site. When insect numbers topped action thresholds, a pest alert e-mail was sent to all extension personnel.

Rust was found on leaf samples from 37 counties but occurred late enough in soybean development that yield was not affected. Monitoring efforts reduced the chance of wasteful spraying of fungicides by 75 percent.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
216	Integrated Pest Management Systems

**Outcome #4****1. Outcome Measures**

Acres treated with insecticides, herbicides and fungicides with emphasis on high risk pesticides (source = USDA/ERS)

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
215	Biological Control of Pests Affecting Plants

**Outcome #5****1. Outcome Measures**

Three thousand (3,000) pesticide applicators will meet the legal need of certification by improving their knowledge of pesticides and their use.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, new commercial applicators must be certified by examination and then be recertified by attending training on a three-year cycle. Environmental and health concerns about pesticides, the changing field of pesticide development, new laws and regulations, and registration make a responsive and intensive training program essential. Extension provides educational programs to assist applicators to obtain certification and to recertify applicators for commercial purposes.

**What has been done**

MU Extension, in partnership with the Missouri Department of Agriculture, Missouri Department of Health and Missouri Department of Natural Resources, has conducted training programs statewide to prepare new applicators for the state administered exam and to meet the requirements for recertification.

**Results**

A total of 2,044 commercial applicators attended University of Missouri Extension Pesticide Applicator Training sessions during 2007. A survey of commercial applicators who attended certification sessions reported "planned" changes in their behavior as a result of the training: 94 percent of the participants plan to spend more time reading the pesticide label when mixing or using chemicals; 90 percent plan "always" to use personal protective equipment when mixing and applying pesticides; 86 percent plan to familiarize themselves with their company's emergency plan; and 96 percent rated the overall training as "excellent or good."

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants
211	Insects, Mites, and Other Arthropods Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
215	Biological Control of Pests Affecting Plants

#### Outcome #6

##### 1. Outcome Measures

Two thousand (2,000) agricultural producers, turfgrass and ornamental professionals and agribusiness personnel will acquire knowledge and skills to aid in the successful adoption and implementation of existing integrated pest management practices.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

The need for training in the safe application of pesticides is of high importance due to both the legal requirements and a real need for technical knowledge. Society's demands for a cleaner environment encourage private applicators (farmers) to increase their knowledge and put new practices into effect for safe and proper use of agricultural pesticides.

###### What has been done

Missouri's Private Pesticide Applicator Training program delivers certification and recertification training sessions to agricultural producers and others on an annual basis. The 3-hour sessions are delivered in all 114 counties by about 30 regional extension specialists. In addition to the formal pesticide training sessions, producers have the option of attaining certification or recertification by viewing an interactive CD-ROM presentation at their local extension center.

###### Results

A total of 2,795 private applicators attended University of Missouri Extension Pesticide Applicator Training sessions during 2007. A survey of the private applicator audience showed the following results: 77 percent of participants indicated the training heightened their awareness of pesticide laws and regulations; 86 percent indicated the training had improved their comprehension of the pesticide label; 75 percent indicated the training improved their knowledge related to protecting the environment; 94 percent indicated the training improved their knowledge of personal protective equipment selection and use; 82 percent indicated the training improved their calibration skills; and 91 percent indicated the training improved their skills and understanding related to proper transportation and storage of pesticides and cleanup of spills.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
216	Integrated Pest Management Systems
213	Weeds Affecting Plants
215	Biological Control of Pests Affecting Plants
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

**Brief Explanation****V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)

**Evaluation Results****Key Items of Evaluation**

**Program #11****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Profit Focused Agriculture

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
601	Economics of Agricultural Production and Farm Management	40%			
602	Business Management, Finance, and Taxation	10%			
603	Market Economics	10%			
604	Marketing and Distribution Practices	10%			
605	Natural Resource and Environmental Economics	15%			
606	International Trade and Development	2%			
607	Consumer Economics	2%			
610	Domestic Policy Analysis	10%			
611	Foreign Policy and Programs	1%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	14.0	0.0	0.0	0.0
<b>Actual</b>	15.8	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c 1001716	1890 Extension 0	Hatch 0	Evans-Allen 0
1862 Matching 0	1890 Matching 0	1862 Matching 0	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**



Conduct multisession workshops using curricula or other appropriate material. Participate in or give presentations at meetings, workshops, conferences, seminars. Develop or update curricula or educational materials. Provide individual assistance as follow-up to group activities. Consult with individuals upon request. Develop and distribute information on current issues related to farm/agricultural profitability through newsletters, Internet postings, personal contacts, and media releases. Keep updated and assist farmers with computer and Internet applications. Conduct surveys or develop case studies relevant to improving farm/agricultural profitability. Evaluate the effectiveness of workshops, training, and other activities. Cooperate with agencies and organizations on activities related to the program objectives.

## 2. Brief description of the target audience

Farmers/ranchers (beginning, primary income, secondary income and transitioning) Landowners (absentee, women, seniors) and agribusinesses/agencies, agribusinesses/agencies (commercial, farmer cooperatives), and agencies/farm organizations (governmental, commodity groups).

## V(E). Planned Program (Outputs)

### 1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	1600	16000	0	0
2007	11364	29953	1226	1231

### 2. Number of Patent Applications Submitted (Standard Research Output)

#### Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

#### Patents listed

### 3. Publications (Standard General Output Measure)

#### Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

## V(F). State Defined Outputs

### Output Target

#### Output #1

#### Output Measure

- Annual training for regional specialists on curriculum-based MO programs and new programs related to Ag Business Manager

Year	Target	Actual
2007	22	26

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Fifty percent of the participants in Annie's Project will develop a strategic plan. A follow-up survey will be conducted after training is complete.
2	Fifty percent of the participants in Golden Age Framing will develop an estate plan. A follow-up survey will be conducted after training is complete.
3	Two new value-added collective agricultural business organizations will be established annually. A follow-up survey will be conducted after training is complete.
4	The improved economic viability of the agribusiness and production agricultural sectors will significantly affect the state's economy and the viability of rural Missouri. USDA statistical data on Missouri farmers will be used. Target 5=5 million.
5	Program participants will report a 50 percent increase in their awareness of existing resources that will increase the profitability of their enterprise. Evaluation forms will be used.
6	There will be a 40 percent increase in the program participants' skills related to risk management and strategic planning. Evaluation forms will be used.
7	There will be a 30 percent increase in program participants' use of risk management tools. A follow-up survey will be conducted after training is complete.

**Outcome #1****1. Outcome Measures**

Fifty percent of the participants in Annie's Project will develop a strategic plan.

A follow-up survey will be conducted after training is complete.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The 2002 USDA Census of Agriculture reported 10,818 Missouri women as farm operators, which was up 34 percent from the 1997 census. The need for practical risk management education is increasing, as women take on management roles in farming. Annie's Project targets farm women with the desire to be empowered with management skills, knowledge and critical decision-making capabilities to use information to actively participate in the farm business and contribute to a viable, profitable business.

**What has been done**

Missouri trained 11 additional staff members to teach Annie's Project, and in turn offered more Annie's Project classes throughout the state. In the past year, 12 classes were offered, with 122 participants (121 female, 1 male). Continuing education takes place through a newsletter published twice per year. The curriculum covers multiple aspects of risk management, including financial, marketing, legal, human resources and production.

**Results**

As part of the 18-hour course, participants complete a balance sheet for their farm. Each participant also receives hands-on training in business plan software and has a business plan at least started during class. Most participants checked insurance policies, bank accounts and titles to make sure names were listed as intended. Many found surprises and made changes. Participants report using the information to choose record keeping software, change market plans, share information with other family members, use more farm-related websites, create spreadsheets, and to improve communication with all farm partners. Participants report understanding "the futures market," "crop insurance," "the importance of being organized and keeping good records," "The importance of a marketing strategy," and "more about utilizing the computer for analyzing our farm operation."

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics

**Outcome #2****1. Outcome Measures**

Fifty percent of the participants in Golden Age Framing will develop an estate plan. A follow-up survey will be conducted after training is complete.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The 2002 USDA Census of Agriculture reported 85,931 Missouri farmers over the age of 55. The average age is 56 years. The National Safety Council reports that "Senior farmers are at increased risk from farm accidents and injuries." Golden Age Farming addresses the human risks of farmers as they grow older. The needs and priorities of the aging generation may change, and difficult, unfamiliar decisions may need to be made.

**What has been done**

Ag Business specialists and counterparts in human environmental sciences have developed Golden Age Farming to address the difficult-to-discuss issues that farmers need to address as they grow older. Classes have been held in various locations throughout the state. Participants are mainly couples and in some cases multiple generations from the same farm. Additional classes are being planned for various locations.

**Results**

The Golden Age Farming class covers retirement planning, estate planning, adaptations to stay on the farm longer and transitioning the farm. Several evaluation pieces are administered throughout the class. All participants identified estate planning goals, estimated present/future care option wants and needs, and reviewed their annual Social Security earnings for retirement. Most participants reported reviewing their wills or trusts. All participants at least started and understood how to complete the following items: health care directive, durable power of attorney, distribution of tangible personal property, SOS (special organized stuff), timeline chart, and business succession. Comments from the participants included: "There are a lot more things to think about for retirement than most people guess" and "It's never too early to start planning for retirement."

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

**Outcome #3****1. Outcome Measures**

Two new value-added collective agricultural business organizations will be established annually. A follow-up survey will be conducted after training is complete.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The future economic viability and quality of life in rural Missouri are based on the development of a "new agricultural economy" that will add value to the commodities raised there and develop new business models for Missouri producers.

#### **What has been done**

The Missouri Value Added Center (MOVAC) and five Regional Agriculture Business Counselors (RABCs) facilitate value-added business endeavors within specific agrographic regions of Missouri, develop leadership skills, and act as the initial catalyst for assessing funding opportunities, sourcing resource providers and communicating with regulatory agencies and decision makers.

#### **Results**

The MOVAC staff was involved in two grants totaling over \$500,000, assisted clientele in applying for more than \$450,000 in competitive value-added grants for CY07-08, assisted in determining three business opportunities to be infeasible, facilitated business development of a biodiesel facility soon to be online with annual sales of nearly \$100 million and a staff of 50 employees, assisted in analysis of a biodiesel plant now operational with annual sales of \$40 million and about 20 employees, facilitated an ethanol production facility now operational with annual sales in excess of \$100 million and about 45 employees, and provided feasibility assessment for a project that potentially can add value to cattle producers in the amount of more than \$10 million annually. The staff is currently working with an aquaculture entity to develop a business plan for processing product with estimated sales of \$4 million to \$5 million annually.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices
603	Market Economics

#### **Outcome #4**

##### **1. Outcome Measures**

The improved economic viability of the agribusiness and production agricultural sectors will significantly affect the state's economy and the viability of rural Missouri. USDA statistical data on Missouri farmers will be used. Target 5=5 million.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Condition Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	5	5

##### **3c. Qualitative Outcome or Impact Statement**

###### **Issue (Who cares and Why)**

In 2006-07 the growing biofuels industry began to affect Missouri's agricultural production sector. A major issue was whether this new market would have a positive or negative effect on Missouri crop and livestock sectors.

###### **What has been done**

Many group events and personal consultations were conducted by regional specialists and faculty to make farmers aware of opportunities and challenges resulting from the production of biofuels. (See details under risk management and strategic planning outcomes.) Faculty members provided price forecasts and analysis to aid producers in strategic planning. These were posted on web sites, used at farmer meetings and conferences, and relayed to a national audience by the media.

## Results

In 2006 total net farm income of Missouri farmers increased \$60,571,000 over 2005. The number of cattle on farms on Jan 1, 2007, was down about 2 percent from 2006, but the number of hogs and pigs increased 11 percent. Sheep, goats and poultry also increased. Acres planted to corn in 2007 increased 26 percent, wheat 5 percent, and grain sorghum 10 percent. Corn price increased from \$2.29/bu in July 2006 to \$3.84 in June 2007, largely due to increased demand for ethanol production. Wheat price increased from \$3.38/bu in July 2006 to \$4.65 in June 2007, and soybeans increased from \$5.67/bu to \$7.55. Feeder livestock prices were down a little during these months, but slaughter livestock prices were up. Higher grain prices had a negative effect on feeder livestock prices, but this did not offset the positive effect of higher grain prices on Missouri's total net farm income. Even though input prices increased -- especially for fuels -- higher grain prices covered this expense, too.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
603	Market Economics
601	Economics of Agricultural Production and Farm Management
604	Marketing and Distribution Practices

## Outcome #5

### 1. Outcome Measures

Program participants will report a 50 percent increase in their awareness of existing resources that will increase the profitability of their enterprise. Evaluation forms will be used.

### 2. Associated Institution Types

•1862 Extension

### 3a. Outcome Type:

Change in Knowledge Outcome Measure

### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Locating resources that can improve profitability is a time-consuming task. Sources of information are numerous and may be confusing, out-of-date, of questionable quality, new or unknown. Extension can help producers become more profitable by helping them locate good sources of information for making management and marketing decisions.

#### What has been done

MU's Agriculture Extension Bulletin Board (AgEBB) web site was updated with current management and marketing information and links to other sites. Staff demonstrated AgEBB at field days and conferences and held a computer users conference to demonstrate new technology and resources. Regional specialists publicized resources available through newsletters, handouts at events, media releases, web sites and personal contact.

## Results

Increased awareness was shown by the increased number of hits to the AgEBB web site. More farmers registered to use interactive programs. Attendance at the farm computer users conference increased and included a wider audience. Evaluations from 344 participants at a series of agricultural lender seminars showed that about 75 percent had used the resources provided and some requested a list of web resources be expanded. The most popular management resources this year were enterprise budgets, cost and returns estimates, and price information and forecasts. Latest USDA data indicated rural access to the Internet still lagged urban locations, so many newsletters and publications continued to be made available in both printed and electronic formats accessible to all users.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
602	Business Management, Finance, and Taxation
601	Economics of Agricultural Production and Farm Management

**Outcome #6****1. Outcome Measures**

There will be a 40 percent increase in the program participants' skills related to risk management and strategic planning. Evaluation forms will be used.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Weather and economic conditions were major challenges in 2006-07. A hard freeze over the entire state in late April 2007 and extreme weather events of rain and drought affected farmers statewide. Fuel and input prices increased across the nation. Grain prices were high -- good for grain producers, bad for livestock producers. Adjusting production and marketing strategies or changing business arrangements to manage risk and take advantage of new opportunities was critical for many.

**What has been done**

AgBusiness specialists conducted over 165 group events: risk management strategies for livestock producers, replant /harvest decisions for frost-damaged wheat, changing crop mix to take advantage of higher grain prices, risks/benefits of producing biofuels, grain marketing strategies, adjusting rental agreements, fence laws, tax management, machinery and labor sharing. State specialists provided current price forecasts and analysis for planning and assisted with 70 events.

**Results**

These events were designed to meet current and critical needs as evidenced by personal observation and clients' requests for information. No pre-event testing was done to determine participants' level of knowledge. Thus it was not possible to evaluate quantitatively how much their skills improved. Post-event evaluations were positive. Regional specialists reported thousands of individual consultations. USDA data indicates Missouri producers made adjustments in their cropping and livestock systems, with the number of total farms and acreage remaining steady and income increasing.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
604	Marketing and Distribution Practices
602	Business Management, Finance, and Taxation
601	Economics of Agricultural Production and Farm Management
603	Market Economics

**Outcome #7****1. Outcome Measures**

There will be a 30 percent increase in program participants' use of risk management tools. A follow-up survey will be conducted after training is complete.

## 2. Associated Institution Types

- 1862 Extension

### 3a. Outcome Type:

Change in Action Outcome Measure

### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Electronic tools for risk management on farms are constantly being upgraded and new ones developed. Living in rural areas can delay adoption of electronic tools because of Internet connectivity problems and difficulty finding knowledgeable persons to explain software and its application to farming. To survive and compete in today's rapidly changing agricultural industry, producers must be able to use the best technology available.

#### What has been done

AgBusiness Specialists conducted 15 farmer training sessions on using Quicken, QuickBooks, Excel and Access software. Sessions were also held on choosing farm record software and Internet marketing. MU's interactive weather-related farm-specific web site was expanded and informational sessions were held at field days and conferences. A statewide conference for computer users provided an opportunity to interact, share software and ideas for use, and learn about the latest technologies.

#### Results

There was no pre-session information collected on participants' use of risk management tools, so it was not possible to quantify the overall increase in use. Sessions involved only specific tools but the majority of those who participated in the sessions intended to use them. Post-session evaluations were positive. Increased use of interactive web programs was reported.

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

## V(H). Planned Program (External Factors)

### External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

### Brief Explanation

Weather was an external factor that created the need for immediate programming response. A late hard freeze statewide damaged wheat and other early vegetation. Producers needed assistance in planning how to adjust their businesses for these unexpected losses. Several local areas experienced flooding and drought, which necessitated quick response and specialized information. Staffing changes resulted in restructuring of some planned activities.



**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Other (Comparisons between states)

**Evaluation Results**

The more than 200 group events conducted by regional specialists and faculty used post-event evaluation methods. Those that were annual or repetitive events all received very positive evaluations, including requests they be continued – annual series of tax workshops, lender seminars, computer users conference, business and estate planning workshops. Those that were partially grant funded were also very well received and will be continued as funding permits (Annie's program). Other activities that were very popular and will be continued are teleconferences on fencing laws and legal issues and quarterly agmarketing outlook conferences. All of the group activities involving the biofuels industry and its impact on production methods, the farm economy, and land prices/rents generated positive responses.

**Key Items of Evaluation**

**Program #12****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Show-Me-Select Replacement Heifer Program

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	60%			
303	Genetic Improvement of Animals	20%			
307	Animal Management Systems	10%			
308	Improved Animal Products (Before Harvest)	10%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	13.0	0.0	0.0	0.0
<b>Actual</b>	11.6	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c 735437	1890 Extension 0	Hatch 0	Evans-Allen 0
1862 Matching 0	1890 Matching 0	1862 Matching 0	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

The learner-focused outcomes of this program will expand the scope of the Missouri Show-Me-Select Replacement Heifer Program. These outcomes include: 1) Regional Extension Livestock Specialists, veterinarians, farmers, and allied industry representatives will acquire knowledge and skills to aid in the successful adoption and implementation of existing management practices to improve beef heifer development; 2) Regional Extension Livestock Specialists, practicing veterinarians, producers, and future professionals will acquire new knowledge and skills to aid in the adoption of emerging biotechnologies in beef heifer development, including estrus synchronization and artificial insemination; 4) Regional Extension Livestock Specialists, practicing veterinarians and producers will be able to identify and discuss the economic implications of implementing production practices associated with the Show-Me-Select Replacement Heifer Program; and 5) Participating producers will develop a plan that establishes the Show-Me-Select Replacement Heifer Program as a producer owned and managed system.

**2. Brief description of the target audience**

The audiences targeted in this program are farmers across Missouri actively involved in cow-calf production and marketing. There are no limitations placed on the program in terms of farm or size of cow-herd. The program to date has involved herds as small as 8 cows and as large as 6,000 cows. Numerous sectors of the Missouri livestock industry come together as a result of this program, including University Extension, the Division of Animal Sciences, the University of Missouri College of Veterinary Medicine, the Commercial Agriculture Program, the Missouri Beef Cattle Improvement Association, the Missouri Cattlemen's Association, the Missouri Department of Agriculture, and the Missouri Livestock Marketing Association.

**V(E). Planned Program (Outputs)****1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	565	10000	0	0
2007	1172	1489	18	53

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

Year      Target

Plan:     0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**

**Output #1****Output Measure**

- Provide four in-service training sessions for regional Extension specialists on an annual basis.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	4	2

**Output #2****Output Measure**

- Develop or revise 3 power point presentations for regional

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	15	5

**Output #3****Output Measure**

- Regional and state specialist will conduct at least

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	13

**Output #4****Output Measure**

- Regional specialist will assist with producer sales.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	12	12

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Economic assessment of the program based on surveys of participating farmers.
2	Number of animals (heifers) involved.
3	Number of participating veterinarians on a region-to-region basis.
4	Assessment of change in a production medicine approach to veterinary practices that participate in the program.
5	Income generated from regional sales and added value of heifers retained on farms that participate in the program.
6	Added revenue generated to related sectors of the beef industry and estimates of new job creation as a result of this program.
7	Total impact on the state's economy as a result of the Show-Me-Select heifer program and related activities. 3=3 million.
8	Adding value to Missouri raised beef cattle.
9	Number of farmers in Missouri that participate in the program.
10	Adoption rate of management practices by participating farmers.

**Outcome #1****1. Outcome Measures**

Economic assessment of the program based on surveys of participating farmers.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The audiences targeted in this program include regional extension livestock specialists, veterinarians, and farmers across Missouri that are actively involved in cow-calf production and marketing. Technology transfer with respect to the management practices involved is not size dependent but rather farmer dependent in terms of introducing a fundamental change in approach to management and marketing that affects a farmer's profitability profile.

**What has been done**

The Missouri Show-Me-Select Replacement Heifer Program was designed to improve reproductive efficiency of beef herds in Missouri and increase individual farm income. The program objectives include: 1) a total quality management approach for health and management of heifers from weaning to late gestation; 2) increased marketing opportunities for, and added value to, Missouri-raised heifers; and 3) the creation of reliable sources of quality commercial and purebred replacement females.

**Results**

The Show-Me-Select Replacement Heifer Program is the first comprehensive, statewide, on-farm beef heifer development and marketing program in the United States. Participation in the program from 1997 to 2007 involved 77,784 heifers on 640 farms across Missouri, 186 local veterinarians, 10 regional extension livestock coordinators, and 17 regional extension livestock specialists. The marketing component of the program over this same period involved 82 sales at 10 locations. During this time, 19,141 heifers sold through sanctioned Show-Me-Select sales with gross receipts of \$20,748,692. Total net impact on Missouri's economy from the first 11 years of the Show-Me-Select Replacement Heifer Program and sales exceeded \$35,000,000. Producers from 98 of Missouri's 114 counties (86%) have enrolled heifers in the program, and 64 counties in Missouri (56% of the total) list the Show-Me-Select Replacement Heifer Program as a priority program for their county in the their current Program of Work.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
301	Reproductive Performance of Animals
307	Animal Management Systems
303	Genetic Improvement of Animals
308	Improved Animal Products (Before Harvest)

**Outcome #2****1. Outcome Measures**

Number of animals (heifers) involved.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Continuation of low adoption rates of best management practices in the United States will ultimately erode the competitive position of the U.S. cattle industry. Other countries are adopting new technologies for animal production more rapidly than the United States. Unless owners of commercial cow herds aggressively implement reproductive and genetic improvement, the U.S. will lose its competitive advantage in production of high-quality beef.

**What has been done**

A number of management procedures have been cited to have a significant impact on beef herds and their resulting performance as measured by reproduction and productivity. Only a limited percentage of beef cattle operations use these management procedures. Best management practices for replacement beef heifers, when collectively viewed as a "program," can assist producers in more effectively managing reproduction, production and marketing.

**Results**

The reproductive goals for heifers enrolled in the program are aimed at improving breeding performance during the heifers' first breeding period, minimizing the incidence and severity of dystocia, and increasing successful rebreeding of heifers during the subsequent breeding season. Producers are using available technologies for on-farm heifer development that are now spilling over into the cow herd. Significantly increased interest in, and use of, estrus synchronization and AI stems perhaps from a differential in sale prices but, more important, from successful application. In general, there has been a growing awareness, understanding and appreciation for the importance of reproductive management to the whole herd.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
303	Genetic Improvement of Animals
307	Animal Management Systems
301	Reproductive Performance of Animals

**Outcome #3****1. Outcome Measures**

Number of participating veterinarians on a region-to-region basis.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Veterinarians serve as key information sources for U.S. beef producers and are essential in facilitating the adoption of various reproductive procedures. Nearly two-thirds (60.8%) of cow-calf producers cited their veterinarian as a "very important" source of information for their cow-calf operation, including health, nutrition, production and management.

#### **What has been done**

Implementation involved University specialists working closely with producers, regional extension specialists and veterinarians. On-farm development programs that involve local veterinarians, state and regional extension specialists, and individual farm operators provide the structure through which change can occur.

#### **Results**

The success of this program over the past years is largely due to reaching this target audience and to the associated impact of that connection. Numerous sectors of the Missouri livestock industry came together as a result of this program, including University of Missouri Extension, the College of Agriculture Food and Natural Resources, the College of Veterinary Medicine, the Commercial Agriculture Program, the Missouri Beef Cattle Improvement Association, the Missouri Cattlemen's Association, the Missouri Department of Agriculture, and the Missouri Livestock Marketing Association. Regional extension livestock specialists serve as coordinators of the program locally and work closely with the 186 veterinarians involved with the program statewide. State specialists provide program support to regional extension field staff and participating veterinarians.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
307	Animal Management Systems
301	Reproductive Performance of Animals

#### **Outcome #4**

##### **1. Outcome Measures**

Assessment of change in a production medicine approach to veterinary practices that participate in the program.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

###### **Issue (Who cares and Why)**

Veterinarians provide expertise in the areas of health, assessment of reproductive potential, fetal aging and pregnancy diagnosis. Nearly two-thirds (60.8%) of cow-calf producers cited their veterinarian as a "very important" source of information for their cow-calf operation, including health, nutrition, production and management.

###### **What has been done**

Implementation involved University specialists working closely with producers, regional extension specialists, and veterinarians. On-farm development programs that involve local veterinarians, state and regional extension specialists, and individual farm operators provide the structure through which change can occur.

###### **Results**



Veterinarians provide expertise in the areas of health, assessment of reproductive potential, fetal aging and pregnancy diagnosis. Veterinarians serve as key information sources for U.S. beef producers and are essential in facilitating the adoption of various reproductive procedures. Nearly two-thirds (60.8%) of cow-calf producers cited their veterinarian as a "very important" source of information for their cow-calf operation including health, nutrition, production and management.

The success of this program over the past years is largely due to reaching this target audience and to the associated impact of that connection. Implementation involved University specialists working closely with producers, regional extension specialists, and veterinarians. On-farm development programs that involve local veterinarians, state and regional extension specialists, and individual farm operators provide the structure through which change can occur.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
301	Reproductive Performance of Animals
303	Genetic Improvement of Animals

#### Outcome #5

##### 1. Outcome Measures

Income generated from regional sales and added value of heifers retained on farms that participate in the program.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

The Missouri Show-Me-Select Replacement Heifer Program was designed to improve reproductive efficiency of beef herds in Missouri and increase individual farm income. The program objectives include: 1) a total quality management approach for health and management of heifers from weaning to late gestation; 2) increased marketing opportunities for, and added value to, Missouri-raised heifers; and 3) the creation of reliable sources of quality commercial and purebred replacement females.

###### What has been done

Implementation of the Show-Me-Select Replacement Heifer Program in Missouri has resulted in expanded working relationships among producers, extension specialists, and veterinarians. This has resulted in an increased adoption rate of management practices used in the development of replacement beef heifers, and ultimately improved reproductive management of cow herds across Missouri.

###### Results

During the past 11 years, 640 farms enrolled 77,784 heifers in the program. Regional extension livestock specialists serve as coordinators of the program locally and work closely with the 186 veterinarians involved with the program statewide. State specialists provide program support to regional extension field staff and participating veterinarians. The reproductive goals for heifers enrolled in the program are aimed at improving breeding performance during the heifers' first breeding period, minimizing the incidence and severity of dystocia, with the resulting delivery of healthy vigorous calves, and successful rebreeding of heifers during the subsequent breeding season. The marketing component of the program facilitated the sale of 19,141 heifers in 82 sales across Missouri from 1997 through the fall sales in 2007. These sales generated interest from 6,528 prospective buyers that formally registered to buy heifers, and 2,409 individuals that purchased heifers from the various sales. Heifers from the program have now sold to farms in Arkansas, Arizona, Florida, Georgia, Iowa, Illinois, Indiana, Kentucky, Kansas, Missouri, Nebraska, Oklahoma, South Carolina, South Dakota, Tennessee and Texas. Collectively, 82 sales have generated \$20,748,692 in gross sales. The Missouri Show-Me-Select Replacement Heifer Program is the first statewide on-farm development and marketing program of its kind in the U.S.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
308	Improved Animal Products (Before Harvest)
301	Reproductive Performance of Animals
307	Animal Management Systems
303	Genetic Improvement of Animals

#### Outcome #6

##### 1. Outcome Measures

Added revenue generated to related sectors of the beef industry and estimates of new job creation as a result of this program.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

The Missouri Show-Me-Select Replacement Heifer Program was designed to improve reproductive efficiency of beef herds in Missouri and increase individual farm income. The program objectives include: 1) a total quality management approach for health and management of heifers from weaning to late gestation; 2) increased marketing opportunities for, and added value to, Missouri-raised heifers; and 3) the creation of reliable sources of quality commercial and purebred replacement females.

###### What has been done

The Missouri Show-Me-Select Replacement Heifer Program illustrates the economic impact of an organized program that supports use of best management practices. Heifers that sold (n=19,141) between fall of 1996 and fall of 2007 at Show-Me-Select Program Sales sold for an average of \$1084 per heifer, which is over \$100/head greater than the price received per head for bred heifers at conventional livestock sales.

###### Results

The impact on Missouri's economy from the first 11 years of the Show-Me-Select program exceeds \$35,000,000. Producers from 103 (90%) of 114 counties have participated in the Show-Me-Select Replacement Heifer Program. Buyers from 112 (98%) of 114 counties registered to purchase heifers from 1997-2007 Show-Me-Select Replacement Heifer Sales. Buyers from 108 of the 114 counties (95%) purchased heifers from 1997-2007 Show-Me-Select Replacement Heifer sales. Show-Me-Select Replacement Heifers have now sold into 16 states, including Arkansas, Arizona, Florida, Georgia, Iowa, Illinois, Indiana, Kentucky, Kansas, Missouri, Nebraska, Oklahoma, South Carolina, South Dakota, Tennessee and Texas.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
303	Genetic Improvement of Animals
308	Improved Animal Products (Before Harvest)

#### Outcome #7

##### 1. Outcome Measures

Total impact on the state's economy as a result of the Show-Me-Select heifer program and related activities. 3=3 million.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Continuation of low adoption rates of best management practices in the United States will ultimately erode the competitive position of the U.S. cattle industry. Other countries are adopting new technologies for animal production more rapidly than the U.S. Unless owners of commercial cow herds aggressively implement reproductive and genetic improvement, the U.S. will lose its competitive advantage in production of high-quality beef.

###### What has been done

The Show-Me-Select Replacement Heifer Program -- like Extension and the Land Grant system—is based on the use and application of what we know to create new knowledge. Meaningful assessment of this program began by building evaluation into its design. Data collection is part of the delivery process and reinforces the development of sound management practices through individual farms that participate in the program.

###### Results

The marketing component of the program facilitated the sale of 19,141 heifers in 82 sales across Missouri from 1997 through the fall sales in 2007. These sales generated interest from 6,528 prospective buyers that formally registered to buy heifers, and 2,409 individuals that purchased heifers from the various sales. Heifers from the program have now sold to farms in Arkansas, Arizona, Florida, Georgia, Iowa, Illinois, Indiana, Kentucky, Kansas, Missouri, Nebraska, Oklahoma, South Carolina, South Dakota, Tennessee and Texas.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
308	Improved Animal Products (Before Harvest)
303	Genetic Improvement of Animals
301	Reproductive Performance of Animals
307	Animal Management Systems

#### Outcome #8

**1. Outcome Measures**

Adding value to Missouri raised beef cattle.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Continuation of low adoption rates of best management practices in the United States will ultimately erode the competitive position of the U.S. cattle industry. Other countries are adopting new technologies for animal production more rapidly than the U.S. Unless owners of commercial cow herds aggressively implement reproductive and genetic improvement, the U.S. will lose its competitive advantage in production of high-quality beef. International players that are more technically astute and competitively advantaged will position themselves to dominate the production and sale of high-quality beef worldwide.

**What has been done**

A number of management procedures have been cited to have a significant impact on beef herds and their resulting performance as measured by reproduction and productivity. Only a limited percentage of beef cattle operations use these management procedures. Best management practices for replacement beef heifers, when collectively viewed as a "program," can assist producers in more effectively managing reproduction, production and marketing. These practices add value to the general performance and productivity of herds both immediately and long-term.

**Results**

The Missouri Show-Me-Select Replacement Heifer Program illustrates the economic impact an organized program that supports use of best management practices. Heifers that sold (n=19,141) between the fall of 1996 and the fall of 2007 at Show-Me-Select Program Sales sold for an average of \$1084 per heifer, which is over \$100/head greater than the price received per head for bred heifers at conventional livestock sales. The impact on Missouri's economy from the first 11 years of the Show-Me-Select program exceeds \$35,000,000. Producers from 103 (90%) of 114 counties have participated in the Show-Me-Select Replacement Heifer Program. Buyers from 112 (98%) of 114 counties registered to purchase heifers from 1997 to 2007 Show-Me-Select Replacement Heifer Sales. Buyers from 108 (95%) of the 114 counties purchased heifers from 1997 to 2007 Show-Me-Select Replacement Heifer sales. Show-Me-Select Replacement Heifers have now sold into 16 states.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
307	Animal Management Systems
303	Genetic Improvement of Animals
301	Reproductive Performance of Animals
308	Improved Animal Products (Before Harvest)

**Outcome #9****1. Outcome Measures**

Number of farmers in Missouri that participate in the program.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri ranks second in the United States in the number of beef cows in production with over 2 million cows on 68,000 farms. The sale of cattle and calves contributes nearly 20 percent annually to Missouri's total farm cash receipts. The definitive outcome of this program was intended in part to add value to beef heifers by expanding marketing opportunities as a result of technology adoption, production verification, collective action and best management practices.

**What has been done**

The Missouri Show-Me-Select Replacement Heifer Program was designed to improve reproductive efficiency of beef herds in Missouri and increase individual farm income. The program objectives include: 1) a total quality management approach for health and management of heifers from weaning to late gestation; 2) increased marketing opportunities for, and added value to, Missouri-raised heifers; and 3) the creation of reliable sources of quality commercial and purebred replacement females.

**Results**

During the past 11 years, 640 farms enrolled 77,784 heifers in the program. The reproductive goals for heifers enrolled in the program are aimed at improving breeding performance during the heifers' first breeding period, minimizing the incidence and severity of dystocia, and successful rebreeding of heifers during the subsequent breeding season. The marketing component of the program facilitated the sale of 19,141 heifers in 82 sales across Missouri from 1997 through the fall sales in 2007. These sales generated interest from 6,528 prospective buyers that formally registered to buy heifers, and 2,409 individuals that purchased heifers from the various sales. Heifers from the program have now sold to farms in Arkansas, Arizona, Florida, Georgia, Iowa, Illinois, Indiana, Kentucky, Kansas, Missouri, Nebraska, Oklahoma, South Carolina, South Dakota, Tennessee and Texas.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
301	Reproductive Performance of Animals
307	Animal Management Systems
303	Genetic Improvement of Animals
308	Improved Animal Products (Before Harvest)

**Outcome #10****1. Outcome Measures**

Adoption rate of management practices by participating farmers.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri ranks second in the United States in the number of beef cows in production with over 2 million cows on 68,000 farms. The sale of cattle and calves contributes nearly 20 percent annually to Missouri's total farm cash receipts. The definitive outcome of this program was intended in part to add value to beef heifers by expanding marketing opportunities as a result of technology adoption, production verification, collective action and best management practices.

**What has been done**

A number of management procedures have been cited to have a significant impact on beef herds and their resulting performance as measured by reproduction and productivity. Only a limited percentage of beef cattle operations use these management procedures. Best management practices for replacement beef heifers, when collectively viewed as a "program," can assist producers in more effectively managing reproduction, production and marketing.

**Results**

The Show-Me-Select Replacement Heifer Program is the first comprehensive, statewide, on-farm beef heifer development and marketing program in the United States. Participation in the program from 1997 to 2007 involved 77,784 heifers on 640 farms across Missouri, 186 local veterinarians, 10 regional extension livestock coordinators, and 17 regional extension livestock specialists. The marketing component of the program over this same period involved 82 sales at 10 locations. During this time, 19,141 heifers sold through sanctioned Show-Me-Select sales with gross receipts of \$20,748,692. Producers from 103 (90%) of 114 counties have participated in the Show-Me-Select Replacement Heifer Program. Buyers from 112 (98%) of 114 counties registered to purchase heifers from 1997-2007 Show-Me-Select Replacement Heifer Sales. Buyers from 108 (95%) of the 114 counties purchased heifers from 1997-2007 Show-Me-Select Replacement Heifer sales. Show-Me-Select Replacement Heifers have now sold into 16 states.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
307	Animal Management Systems
301	Reproductive Performance of Animals
308	Improved Animal Products (Before Harvest)
303	Genetic Improvement of Animals

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Economy
- Other (Marketing Fluctuations)

**Brief Explanation**

The audiences targeted in this program include regional extension livestock specialists, veterinarians and farmers across Missouri that are actively involved in cow-calf production and marketing. There were no limitations placed on the program in terms of farm or size of cow herd. The pilot programs involved herds as small as 15 cows and as large as 800 cows. Technology transfer with respect to the management practices involved is not size dependent but rather farmer dependent in terms of introducing a fundamental change in approach to management and marketing that affects a farmer's profitability profile. The success of this program over the past years is largely due to reaching this target audience and to the associated impact of that connection. Numerous sectors of the Missouri livestock industry came together as a result of this program, including University Outreach and Extension, the College of Agriculture Food and Natural Resources, the College of Veterinary Medicine, the Commercial Agriculture Program, the Missouri Beef Cattle Improvement Association, the Missouri Cattlemen's Association, the Missouri Department of Agriculture and the Missouri Livestock Marketing Association. Since the program was piloted in 1997, 640 farms in Missouri have enrolled approximately 77,784 heifers in the Show-Me-Select Replacement Heifer Program. The program out-state has been led by 10 regional extension livestock specialists who serve as coordinators of the program in their respective regions, and 17 additional specialists across the state who support efforts in these regions. In addition, 186 veterinarians in Missouri have participated in the Show-Me-Select Replacement Heifer Program since its inception.

The Show-Me-Select Replacement Heifer Program, like Extension and the Land Grant System, was founded on the use and application of what we know to create new knowledge. Hence, evaluation has had an impact in the program itself. Meaningful assessment of this program began with building evaluation into the design. Data collection was part of the delivery process and reinforced the development of sound management practices through individualized demonstrations conducted on farms that participated in the Show-Me-Select Replacement Heifer Program. Farmers used data generated on their own farms, and the program focused on action alternatives based on the data generated. The end result was that a negotiated participatory process evolved among the regional extension livestock specialists, the veterinarians, and the farmers with support from state specialists. Future competitiveness of farms involved with the production and sale of beef cattle requires a fundamental change in development practices being used on breeding heifers.

The Overall Project Goal was to redirect and expand the scope of the Missouri Show-Me-Select Replacement Heifer Program. This was supported from current programming efforts and the existing database from the Show-Me-Select Replacement Heifer Program to serve as a conduit in the development of new educational programming areas.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

## **Evaluation Results**

### **Key Items of Evaluation**

**Program #13****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Applying Science and Technology

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	9.0	0.0	0.0	0.0
<b>Actual</b>	7.7	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
379130	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
112241	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**



Food Science: Show Me Quality Assurance, Pork Quality Assurance, Camp Food and Fitness, Meats Contest & Cured Ham, Growth & Quality of Live Animal Evaluation, Livestock Judging and Grading. Animal Science Food Animal: Beef Project, Judging, Demonstration, Exhibition; Sheep Project, Judging, Demonstration, Exhibition; Swine Project, Judging, Demonstration, Exhibition; Goat Project, Judging, Demonstration, Exhibition; Dairy Project, Judging, Demonstration, Exhibition; Poultry Judging, Demonstration, Exhibition. Animal Science Companion Animal: Horse Project, Bowl, Hippology, Judging, Demonstration, Exhibition; Dog Project, Judging, Demonstration, Exhibition; Cat Project, Judging, Demonstration, Exhibition. Vet Science: Project, Judging, Demonstration, Exhibition. Embryology. Plant Science: Horticulture Project, Judging, Demonstration, Exhibition; Soybean Project, Judging, Demonstration, Exhibition; Corn Project, Judging, Demonstration, Exhibition; Gardening Judging, Demonstration, Exhibition; Bee Keeping. Environmental/Natural Sciences: Project, Judging, Demonstrations, Exhibition. Community Mapping: Water Quality/Aquatic Education; Sports Fishing; Project WET; Wildlife Habitat and Management; Project WILD; Leopold Education Project; Geology; Forestry Project, Demonstration and Exhibition; Project Learning Tree; Solid Waste Management. Information Sciences: Project, Judging, Demonstration, Exhibition, Community Mapping; Computers; Software-based projects; Geo-Spatial; Internet; Digital Media. Physical Sciences Project, Judging, Demonstration, Exhibition, Community Mapping; Robotics; Design; Bicycle; Built Environments; Home Environment; Design/Manufacturing – Textiles; Aero Space; Woodworking; Welding; Electricity; Small Engines; Energy Use and Conservation.

## 2. Brief description of the target audience

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders) Youth aged 5 - 19.

## V(E). Planned Program (Outputs)

### 1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	500	0	25000	0
2007	9581	9990	43536	19250

### 2. Number of Patent Applications Submitted (Standard Research Output)

#### Patent Applications Submitted

Year      Target

Plan:     0

2007 :    0

#### Patents listed

### 3. Publications (Standard General Output Measure)

#### Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	2	2	4

## V(F). State Defined Outputs

### Output Target

**Output #1****Output Measure**

- Attendance of project leaders at workshops for food science, animal science, plant science, environmental science, informatio

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	9581

**Output #2****Output Measure**

- Number of youth enrolled in food science, animal science, plant science, environmental science, informational sciences and pl

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	71389

**Output #3****Output Measure**

- Number of youth enrolled in embryology.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	31771

**Output #4****Output Measure**

- Number of hits on website.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	11403

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Youth will competently demonstrate knowledge and skills gained through demonstrations and project exhibition.

**Outcome #1****1. Outcome Measures**

Youth will competently demonstrate knowledge and skills gained through demonstrations and project exhibition.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	12000	43536

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Command of science, engineering and technology by youth is essential for their contribution to the economic leadership of communities. America presently faces a significant challenge - young people not prepared with the workforce skills to compete in the 21st century.

**What has been done**

Currently, 71,389 youth are enrolled in 4-H science, engineering and technology projects.

**Results**

As a part of the national study, 214 Missouri youth in grades 6-10 also responded to questions on attitudes toward science and technology. The students included 126 4-Hers and 88 non-4-Hers.

Preliminary findings present a "good news...bad news" picture about these adolescents' attitudes toward careers in scientific or technological fields. 4-H members were significantly more likely to agree that science will be useful in the future, but fewer than one in five of all students expressed an interest in a career in this field. Only about one-fourth of the students thought their parents were interested in science and technology, although 4-H members were more likely to report parental interest in science. 4-H members were almost twice as likely to report spending some of their out-of-school time on science and technology, and they named their 4-H project work as examples of this kind of learning.

Preliminary results from a sample of 347 youth completing the 4-H Study for Positive Youth Development do show that 4-H youth score higher than the national average for personal values and report less risk behavior.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

## Brief Explanation

Lack of adequate federal and state funding limits the number of master-level specialists employed throughout the states to create experiences for children, youth and families to gain knowledge, skills and competencies in science, engineering and technology.

## V(l). Planned Program (Evaluation Studies and Data Collection)

### 1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Other (Demonstration, Judging and Exhib)

## Evaluation Results

Following are Highlights of two studies conducted in Missouri: 1) 4-H Study on Positive Youth Development: Missouri Questions; 2) Missouri 4-H Camping Study: 4-H S.E.T. Questions:

Missouri 4-H joined the national 4-H Study of Positive Youth Development. Twenty-seven University of Missouri Extension faculty collected data from 352 Missouri adolescents in spring 2007. The longitudinal study hopes to understand the factors that help young people grow and develop in positive ways. As a part of the national study, 214 Missouri youth in grades 6-10 also responded to questions on attitudes toward science and technology. The students included 126 4-Hers and 88 non-4-Hers.

Preliminary findings present a “good news....bad news” picture about these adolescents’ attitudes toward careers in scientific or technological fields. 4-H members were significantly more likely to agree that science will be useful in the future, but fewer than one in five of all students expressed an interest in a career in this field. Only about one-fourth of the students thought their parents were interested in science and technology, although 4-H members were more likely to report parental interest in science. 4-H members were almost twice as likely to report spending some of their out-of-school time on science and technology, and they named their 4-H project work as examples of this kind of learning.

### 4-H Camp Evaluation Results:

Resident campers within the 10–13 year age range were surveyed about their camping experience. Parents of this targeted group were also surveyed to gather their perceptions of the impact of 4-H Camp on their children in the development of the life skills listed above.

Section one collected quantitative data by asking youth and parents to respond to statements with one of the following: 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree. Section two collected qualitative information by asking respondents to complete a series of statements in their own words about how they viewed the camp experience. Social Skill Development

Respecting other people and being accepting of others’ and ones own differences received even higher marks overall from youth and parents as being a benefit of attending camp (Youth = 3.15; Parent = 2.98). The ability to make friends received the highest level of positive responses for youth and parents alike (Youth = 2.91; Parent = 3.09). Youth and parents made many comments regarding Social Skill development in the qualitative section of the surveys. Youth seemed to note a new confidence in themselves through learning of their ability to make new friends and maintain older friendships. In addition, youth and parents alike frequently commented on the impact of 4-H Camp in teaching campers that differences are “OK” and that others deserve their respect regardless of those differences. Overwhelmingly, youth voiced their desire for more harmonious relationships in the real world. At the same time, many youth remarked about ways they more greatly valued themselves as a result of camp as they discovered newfound talents, interests, and confidence in themselves.

## Key Items of Evaluation

Following are Highlights of two studies conducted in Missouri: 1) 4-H Study on Positive Youth Development: Missouri Questions; 2) Missouri 4-H Camping Study: 4-H S.E.T. Questions: Missouri 4-H joined the national 4-H Study of Positive Youth Development. Twenty-seven University of Missouri Extension collected data from 352 Missouri adolescents in spring 2007. The longitudinal study hopes to understand the factors that help young people grow and develop in positive ways. As a part of the national study, 214 Missouri youth in grades 6-10 also responded to questions on attitudes toward science and technology. The students included 126 4-Hers and 88 non-4-Hers.

Preliminary findings present a “good news....bad news” picture about these adolescents’ attitudes toward careers in scientific or technological fields. 4-H members were significantly more likely to agree that science will be useful in the future, but fewer than one in five of all students expressed an interest in a career in this field. Only about one-fourth of the students thought their parents were interested in science and technology, although 4-H members were more likely to report parental interest in science. 4-H members were almost twice as likely to report spending some of their out-of-school time on science and technology, and they named their 4-H project work as examples of this kind of learning.

#### 4-H Camp Evaluation Results:

Resident campers within the 10–13 year age range were surveyed about their camping experience. Parents of this targeted group were also surveyed to gather their perceptions of the impact of 4-H Camp on their children in the development of the life skills listed above.

Section one collected quantitative data by asking youth and parents to respond to statements with one of the following: 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree. Section two collected qualitative information by asking respondents to complete a series of statements in their own words about how they viewed the camp experience.

#### Social Skill Development

Respecting other people and being accepting of others’ and ones own differences received even higher marks overall from youth and parents as being a benefit of attending camp (Youth = 3.15; Parent = 2.98). The ability to make friends received the highest level of positive responses for youth and parents alike (Youth = 2.91; Parent = 3.09). Youth and parents made many comments regarding Social Skill development in the qualitative section of the surveys. Youth seemed to note a new confidence in themselves through learning of their ability to make new friends and maintain older friendships. In addition, youth and parents alike frequently commented on the impact of 4-H Camp in teaching campers that differences are “OK” and that others deserve their respect regardless of those differences. Overwhelmingly, youth voiced their desire for more harmonious relationships in the real world. At the same time, many youth remarked about ways they more greatly valued themselves as a result of camp as they discovered newfound talents, interests, and confidence in themselves.

**Program #14****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Building Character

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	9.0	0.0	0.0	0.0
<b>Actual</b>	7.8	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
488178	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Integrate Show Me Character resources into 4-H Clubs, 4-H Camps, 4-H Council and other meetings and 4-H educational events. Integrate Show Me Character modules into adult and teen volunteer training, workshops; Module 1-Why Character Development; Module 2-Character Development Theory; Module 3-The Six Pillars of Character; Module 4-Making Good Decisions; and Module 5-Competing with Honor.

**2. Brief description of the target audience**

Youth aged 5 to 19. Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders).

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	7500	0	15000	0
2007	468	56488	6998	81943

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	18	0	18

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Number of youth and adults reached by 4-H field and state faculty with the Show Me Character Program.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	145897



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	10,000 youth will report an awareness of the six pillars of character.
2	10,000 youth will report an awareness of how character affects their daily decisions.
3	20 4-H field faculty will integrate Show Me Character into their 4-H program.
4	50 to 60 youth will report annually through the Y2200, State 4-H Recognition Form on how 4-H has influenced their lives through their 4-H Story.

**Outcome #1****1. Outcome Measures**

10,000 youth will report an awareness of the six pillars of character.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	81943

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Young people are bombarded daily with decisions that challenge their character. Since young people spend so many hours each day away from home, caring adults along with their parents need to teach character.

**What has been done**

The Six Pillars of Character Counts are integrated into all MU Extension 4-H Youth Development programs for the 104,157 youth and 11,206 adults.

**Results**

Highlights from the 4-H Camp Evaluation: In the qualitative section of both the youth and parent surveys, respondents frequently commented on campers' improved ability to care for themselves and their belongings while away from home. Youth respondents identified several self-responsibility skills they developed, including taking care of themselves and their belongings, being on time for activities, making their own decisions, and completing tasks. Comments from parents focused on their child learning to be on time and to care for themselves and their personal belongings as a result of their 4-H Camp experience.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

10,000 youth will report an awareness of how character affects their daily decisions.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	6998

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Young people are bombarded daily with decisions that challenge their character. Since young people spend so many hours each day away from home, caring adults along with their parents need to teach character.

#### **What has been done**

The Six Pillars of Character Counts are integrated into all MU Extension 4-H Youth Development programs for the 104,157 youth and 11,206 adults.

#### **Results**

Highlights from the 4-H Camp Evaluation: Youth and parents made many comments regarding Social Skill development in the qualitative section of the surveys. Youth seemed to note a new confidence in themselves through learning of their ability to make new friends and maintain older friendships. In addition, youth and parents alike frequently commented on the impact of 4-H Camp in teaching campers that differences are "OK" and that others deserve their respect regardless of those differences. Overwhelmingly, youth voiced their desire for more harmonious relationships in the real world. At the same time, many youth remarked about ways they more greatly valued themselves as a result of camp as they discovered newfound talents, interests, and confidence in themselves.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

#### **Outcome #3**

##### **1. Outcome Measures**

20 4-H field faculty will integrate Show Me Character into their 4-H program.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Action Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	20	50

##### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Young people are bombarded daily with decisions that challenge their character. Since young people spend so many hours each day away from home, caring adults along with their parents need to teach character.

##### **What has been done**

The Six Pillars of Character Counts are integrated into all MU Extension 4-H Youth Development programs for the 104,157 youth and 11,206 adult.

##### **Results**

Highlights of the 4-H Camp Evaluation: In the qualitative section of both the youth and parent surveys, respondents frequently commented on campers' improved ability to work and communicate with others, including family members, since attending camp. Campers often commented they had learned to help others and to do their share of the work. Particular Teamwork Skills noted by parents were improved responsibility, flexibility, better attitude, helping out, and tenacity as a result of attending 4-H Camp.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

#### **Outcome #4**

**1. Outcome Measures**

50 to 60 youth will report annually through the Y2200, State 4-H Recognition Form on how 4-H has influenced their lives through their 4-H Story.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	50	55

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Young people are bombarded daily with decisions that challenge their character. Since young people spend so many hours each day away from home, caring adults along with their parents need to teach character.

**What has been done**

The Six Pillars of Character Counts are integrated into all MU Extension 4-H Youth Development programs for the 104,157 youth and 11,206 adult.

**Results**

55 youth reflected on what they learned from their 4-H leadership, citizenship, community service and project experiences as they completed the Missouri 4-H Recognition Form. Quotes written by 4-H members in their Missouri Recognition Form include the following: "These activities (community service) have helped me to develop empathy, kindness, caring and compassion for others."

"By being in 4-H, I learned a lot about making good decisions and following through with them. Other important skills are taught through different projects in 4-H such as time management."

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

Character Education is integrated into every 4-H Youth Development program to the point that we do not conduct separate character education programs; the disadvantage to this is that we do not specifically measure for character education outcomes in our programs. Lack of adequate federal and state funding limits the number of master-level specialists employed throughout the states to create experiences for more children, youth and families to gain knowledge, skills and competencies in character education.

## V(I). Planned Program (Evaluation Studies and Data Collection)

### 1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Case Study
- Other (Demos, Exhibs, Behav @ Ed Events)

### Evaluation Results

Resident campers within the 10–13 year age range were surveyed about their camping experience. Parents of this targeted group were also surveyed to gather their perceptions of the impact of 4-H Camp on their children in the development of the life skills listed above.

Section one collected quantitative data by asking youth and parents to respond to statements with one of the following: 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree. Section two collected qualitative information by asking respondents to complete a series of statements in their own words about how they viewed the camp experience.

#### Teamwork Skill Development

In the quantitative section of the surveys, all responses from both youth and parents showed a very high level of positive perceptions about the ability of 4-H Camping Programs to develop Teamwork Skills in campers (Youth = 3.16; Parents = 2.96). While youth generally tended to agree at a higher mean level that they had gained skills in this area than parents did, youth and parents showed the same mean score that indicated the camper had learned to work out disagreements when working with others (Youth = 2.97; Parents = 2.97). The area rated most highly by youth was doing their share when working with other campers (Youth = 3.41), followed by working with other campers to finish a job they had started together (Youth = 3.24), although parents indicated at a lower level that since camp, their child was more likely to do their part (Parents = 3.02).

In the qualitative section of both the youth and parent surveys, respondents frequently commented on campers' improved ability to work and communicate with others, including family members, since attending camp. Campers often commented they had learned to help others and to do their share of the work. Particular Teamwork Skills noted by parents were improved responsibility, flexibility, better attitude, helping out, and tenacity as a result of attending 4-H Camp.

**Self-Responsibility Skill Development** In the quantitative section of the surveys, all responses from both youth and parents showed a very high level of positive perceptions about the ability of 4-H Camping Programs to develop self-responsibility skills in campers (Youth = 3.07; Parents = 2.96), with scores showing very little change from the 2005 survey (Youth Mean change = 0.10) Parents Mean change = 0.02). Youth most enthusiastically agreed with two statements, noting that camp helped them to be on time (Youth = 3.24) and to better complete projects for which they were responsible (3.22). Youth agreed more often than parents they were better at completing projects for which they were responsible (Youth = 3.22; Parents = 2.90). Youth also agreed more often they were better at being on time and making decisions (Youth = 3.02; Parents = 2.96). Finally, youth agreed at a higher rate than parents that 4-H Camp had helped them learn to better take care of themselves (Youth = 3.05; Parents 3.03). In the qualitative section of both the youth and parent surveys, respondents frequently commented on campers' improved ability to care for themselves and their belongings while away from home. Youth respondents identified several self-responsibility skills they developed, including taking care of themselves and their belongings, being on time for activities, making their own decisions, and completing tasks. Comments from parents focused on their child learning to be on time and to care for themselves and their personal belongings.

### Key Items of Evaluation

### Teamwork Skill Development

In the quantitative section of the surveys, all responses from both youth and parents showed a very high level of positive perceptions about the ability of 4-H Camping Programs to develop Teamwork Skills in campers (Youth = 3.16; Parents = 2.96). While youth generally tended to agree at a higher mean level that they had gained skills in this area than parents did, youth and parents showed the same mean score that indicated the camper had learned to work out disagreements when working with others (Youth = 2.97; Parents = 2.97). The area rated most highly by youth was doing their share when working with other campers (Youth = 3.41), followed by working with other campers to finish a job they had started together (Youth = 3.24), although parents indicated at a lower level that since camp, their child was more likely to do their part (Parents = 3.02).

In the qualitative section of both the youth and parent surveys, respondents frequently commented on campers' improved ability to work and communicate with others, including family members, since attending camp. Campers often commented they had learned to help others and to do their share of the work. Particular Teamwork Skills noted by parents were improved responsibility, flexibility, better attitude, helping out, and tenacity as a result of attending 4-H Camp.

**Self-Responsibility Skill Development** In the quantitative section of the surveys, all responses from both youth and parents showed a very high level of positive perceptions about the ability of 4-H Camping Programs to develop self-responsibility skills in campers (Youth = 3.07; Parents = 2.96), with scores showing very little change from the 2005 survey (Youth Mean change = 0.10) Parents Mean change = 0.02). Youth most enthusiastically agreed with two statements, noting that camp helped them to be on time (Youth = 3.24) and to better complete projects for which they were responsible (3.22). Youth agreed more often than parents they were better at completing projects for which they were responsible (Youth = 3.22; Parents = 2.90). Youth also agreed more often they were better at being on time and making decisions (Youth = 3.02; Parents = 2.96). Finally, youth agreed at a higher rate than parents that 4-H Camp had helped them learn to better take care of themselves (Youth = 3.05; Parents 3.03). In the qualitative section of both the youth and parent surveys, respondents frequently commented on campers' improved ability to care for themselves and their belongings while away from home. Youth respondents identified several self-responsibility skills they developed, including taking care of themselves and their belongings, being on time for activities, making their own decisions, and completing tasks. Comments from parents focused on their child learning to be on time and to care for themselves and their personal belongings.

**Program #15****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Choosing Healthy Lifestyles

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	9.0	0.0	0.0	0.0
<b>Actual</b>	6.0	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c 380399	1890 Extension	Hatch	Evans-Allen
	0	0	0
1862 Matching 0	1890 Matching 0	1862 Matching 0	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

4-H Food and Nutrition Projects; Physical Activity 4-H Projects; Camp Food and Fitness; Steppin' Out Fitness Guide; FNEP and 4-H; Couch Potato Challenge Guide; Fight BAC Food Safety; 4-H Shooting Sports; 4-H Child Development Project; 4-H Sportsfishing; Stress Connection Project; 4-H Outdoor Adventures; Develop curricula for teen depression and suicide; Gardening; 4-H Safety Projects; Farm/Rural Safety Days.

**2. Brief description of the target audience**

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 5 - 19.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1500	0	7000	0
2007	1598	1165	7540	8580

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	4	0	4

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Attendance of project leaders at workshops for foods/nutrition, physical activity, shooting sports, healthy relationships and/or s

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	1598

**Output #2****Output Measure**

- Number of youth enrolled in foods projects, physical activity projects, leisure projects, safety projects, camps, educational ever

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	10701



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	4500 youth will competently demonstrate knowledge and skills gained through demonstrations and project exhibition.
2	75% of the participants of Camp Food and Fitness will indicate they are continuing to make healthy food choices 6 months after the camp experience.

**Outcome #1****1. Outcome Measures**

4500 youth will competently demonstrate knowledge and skills gained through demonstrations and project exhibition.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	7000

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Fifty percent of deaths and illnesses in the United States relate directly to unhealthy lifestyles --- primarily poor nutrition, tobacco use, lack of physical activity and unmanaged stress.

**What has been done**

By providing education, programs, and experiences that promote healthy behaviors, 4-H can help youth, adults, and families integrate healthy behaviors, which include physical, mental and emotional well-being into their everyday lives.

**Results**

10,701 youth enrolled in projects related to Choosing Healthy Lifestyles.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

75% of the participants of Camp Food and Fitness will indicate they are continuing to make healthy food choices 6 months after the camp experience.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	20	45

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Fifty percent of deaths and illnesses in the United States relate directly to unhealthy lifestyles --- primarily poor nutrition, tobacco use, lack of physical activity and unmanaged stress.

**What has been done**

By providing education, programs, and experiences that promote healthy behaviors, 4-H can help youth, adults, and families integrate healthy behaviors, which include physical, mental and emotional well-being into their everyday lives. 4-H Camp Food and Fitness helps youth learn more about personal health and well-being, engage in hands-on activities that promote better nutrition and physical fitness and explore college majors and careers in food, nutrition and fitness.

### Results

45 youth attended Camp Food and Fitness. The majority of youth reported learning new information in healthy food choices (38); knife safety (45); and food safety (43). For example a youth commented: "When I saw the fat and sugar in the food I thought "Gross" and it made me think on what not to eat!"

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

### V(H). Planned Program (External Factors)

#### External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

#### Brief Explanation

Lack of adequate federal and state funding limits the number of master-level specialists employed throughout the states to create experiences for more children, youth and families to gain knowledge, skills and competencies to choose healthy lifestyles.

### V(I). Planned Program (Evaluation Studies and Data Collection)

#### 1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Other (Demos, Judging, Exhibs of Knowle)

#### Evaluation Results

Youth who attend 4-H Camp Food and Fitness on the MU Campus will:

- Learn more about personal health and well-being
- Engage in hands-on activities that promote better nutrition and physical fitness
- Explore college majors and careers in food, nutrition and fitness
- Meet youth throughout Missouri who share an interest in food, nutrition and fitness

Youth age 12-14 enrolled in 4-H foods projects are the primary audience but young people associated with any Extension program are eligible to attend if they are 12-14 years of age.

45 youth attended Camp Food and Fitness. The majority of youth reported learning new information in healthy food choices (38); knife safety (45); and food safety (43). For example a youth commented: "When I saw the fat and sugar in the food I thought "Gross" and it made me think on what not to eat!"

#### Key Items of Evaluation

45 youth attended Camp Food and Fitness. The majority of youth reported learning new information in healthy food choices (38); knife safety (45); and food safety (43). For example a youth commented: "When I saw the fat and sugar in the food I thought "Gross" and it made me think on what not to eat!"

**Program #16****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Creating Economic Preparedness

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	2.8	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
178787	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Learning about personal finances through Financial Champions 4-H Project Literature, demonstrations, exhibits, camps and educational events. Learning about consumerism through Consumer Savvy 4-H Project Literature, demonstrations, exhibits, camps and educational events. Learning about youth entrepreneurship through curricula, demonstrations, exhibits, camps and educational events.

**2. Brief description of the target audience**

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 8 - 19.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	100	0	500	0
2007	577	1371	1846	3225

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- 4-H Club, Council Treasurer Roles; 4-H Club fundraisers; 4-H Financial Champions Project Literature; 4-H Consumer Savvy P

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	2949

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Number of youth and adults in treasurer roles for 4-H Clubs, Councils and Committees.
2	Attendance of project leaders at workshops for personal finance, consumer and/or entrepreneurship.
3	Number of youth enrolled in personal finance, consumer and/or entrepreneurship.
4	Number of youth participating in camps, educational events and afterschool.
5	Number of hits on website.
6	350 youth will competently demonstrate knowledge and skills gained through treasurer roles, demonstrations and project exhibition.
7	70 volunteers will competently lead youth through project experiences, promoting demonstrations, judging and other educational events.
8	100 youth will go onto post-secondary education.
9	75 youth will demonstrate career planning by listing their goal(s) and the institution of higher education they choose to achieve their goal(s) on their 4-H state scholarship and/or award applications.

**Outcome #1****1. Outcome Measures**

Number of youth and adults in treasurer roles for 4-H Clubs, Councils and Committees.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	1415

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

**What has been done**

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge are emphasized in our educational experiences.

**Results**

1,415 youth successfully served as treasurers of their 4-H group by monitoring income and expenses, facilitating the auditing of accounts and adhering to policies in compliance to use of the 4-H name and emblem.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

Attendance of project leaders at workshops for personal finance, consumer and/or entrepreneurship.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	577

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

#### **What has been done**

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge are emphasized in our educational experiences.

#### **Results**

577 adults engaged in 4-H educational events that helped them provide experiences for youth to gain knowledge and skills for economic preparedness.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

### **Outcome #3**

#### **1. Outcome Measures**

Number of youth enrolled in personal finance, consumer and/or entrepreneurship.

#### **2. Associated Institution Types**

•1862 Extension

#### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

##### **What has been done**

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge are emphasized in our educational experiences.

##### **Results**

2878 youth are engaged in 4-H projects that create economic preparedness.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

### **Outcome #4**

#### **1. Outcome Measures**

Number of youth participating in camps, educational events and afterschool.



**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	1846

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

**What has been done**

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge is emphasized in our educational experiences.

**Results**

1,846 youth are engaged in 4-H educational events that create knowledge and skills for economic preparedness.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #5****1. Outcome Measures**

Number of hits on website.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	124

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

**What has been done**

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge are emphasized in our educational experiences.

#### Results

124 hits on the website and 55 download of the Extension Youth Entrepreneurship Community Application for VISTA volunteers focusing on youth entrepreneurship.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

#### Outcome #6

##### 1. Outcome Measures

350 youth will competently demonstrate knowledge and skills gained through treasurer roles, demonstrations and project exhibition.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	1415

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

###### What has been done

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge are emphasized in our educational experiences.

#### Results

1415 youth served as treasurers for their 4-H group developing budgets, monitoring income and expenses, facilitating audits and accountability and responsibility.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

#### Outcome #7

##### 1. Outcome Measures

70 volunteers will competently lead youth through project experiences, promoting demonstrations, judging and other educational events.

##### 2. Associated Institution Types

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	577

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

**What has been done**

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge is emphasized in our educational experiences.

**Results**

577 adults were engaged in 90 events that provided 1,846 youth to gain knowledge and skills to create economic preparedness.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #8****1. Outcome Measures**

100 youth will go onto post-secondary education.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	2500

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

**What has been done**

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge are emphasized in our educational experiences.

## Results

The 4-H Youth Futures College Within Reach Program, developed by the University of Missouri Extension/4-H Center for Youth Development and Lincoln University Cooperative Extension, was designed to promote college as an obtainable goal for high school youth who are not typically encouraged to attend college (i.e., first-generation college students). 4-H Youth Futures is an extensive college orientation program that includes a conference on the University of Missouri (MU) and Lincoln University (LU) campuses and pre and post conference mentoring. The goal of the program is to help youth go to college and stay in college. Typically, participants of this program go onto higher education at a rate between 64 and 77%.

A sample of our 4-H members participating in the 4-H Study for Positive Youth Development reported being on a college campus two times the rate of their non-4-H peers. Using a very conservative estimate of 10% of the 4-H membership going on to enroll in higher education, would yield a figure of 2,500 youth going onto college or technical training beyond high school.

In 2007, 210 4-H youth reported the institutions of higher learning they planned post high school.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

## Outcome #9

### 1. Outcome Measures

75 youth will demonstrate career planning by listing their goal(s) and the institution of higher education they choose to achieve their goal(s) on their 4-H state scholarship and/or award applications.

### 2. Associated Institution Types

•1862 Extension

### 3a. Outcome Type:

Change in Action Outcome Measure

### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	75	210

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Knowledge and skills for personal finances, preparing for the changing work place and thinking entrepreneurial are essential for youth to thrive today. The fastest growing parts of the labor force today are women, minorities and immigrants. It is important to provide opportunities for these audiences to be fully prepared and ready to engage in today's changing, global society.

#### What has been done

4-H Youth Development has created experiences for children, youth and families to gain knowledge and skills in personal finances, consumerism, and entrepreneurship. Career interests and associated pathways to acquire the workforce skills and knowledge are emphasized in our educational experiences. Asking youth to indicate where they plan to pursue education beyond high school on an award or scholarship application provides an opportunity for them to think about their higher education plans. In addition, 4-H provides over \$60,000 in scholarships to members.

## Results

In 2007, 210 4-H youth reported the institutions of higher learning they planned post high school.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
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**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

Lack of adequate federal and state funding limits the number of master-level specialists employed throughout the states to create experiences for more children, youth and families to gain knowledge, skills and competencies in creating economic preparedness.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- During (during program)
- Time series (multiple points before and after program)

**Evaluation Results**

Multiple methods of evaluation are used by 4-H Youth Development faculty. These include reviewing products such as treasurer's books, applications for awards or scholarships, and targeting a sample of our 4-H membership to participate in the 4-H Study on Positive Youth Development. Results indicate youth in 4-H received several opportunities to think about higher education. These include applications, campus events and scholarships. Since 2002, a program targeting youth at risk of not going onto higher education, Youth Futures: College Within Reach, has had 64% to 77% annual rate of youth go onto higher education. In 2007, 210 youth indicated which institution of higher learning they planned to attend. Preliminary results of the 4-H Study on Positive Youth Development show 4-H members are two times as likely to have been on a college campus as their non-4-H peers.

**Key Items of Evaluation**

Multiple methods of evaluation are used by 4-H Youth Development faculty. These include reviewing products such as treasurer's books, applications for awards or scholarships, and targeting a sample of our 4-H membership to participate in the 4-H Study on Positive Youth Development. Results indicate youth in 4-H received several opportunities to think about higher education. These include applications, campus events and scholarships. Since 2002, a program targeting youth at risk of not going onto higher education, Youth Futures: College Within Reach, has had 64% to 77% annual rate of youth go onto higher education. In 2007, 210 youth indicated which institution of higher learning they planned to attend. Preliminary results of the 4-H Study on Positive Youth Development show 4-H members are two times as likely to have been on a college campus as their non-4-H peers.

**Program #17****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Enhancing Community Viability Through Youth Leadership

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	7.7	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c 488178	1890 Extension	Hatch	Evans-Allen
	0	0	0
1862 Matching 0	1890 Matching 0	1862 Matching 0	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

4-H Leadership Roles – club, county council/committees, state council, collegiate; Leadership project; Youth Civic Leaders Summit; Extension Council Youth Leaders; Army Service Learning Toolkit; Public Adventures; CECH-UP; Global Education.

**2. Brief description of the target audience**

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 8 - 19.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1200	0	15000	0
2007	5297	8683	16213	11847

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	4	0	4

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Number of youth and adults in leadership roles for 4-H Clubs, Councils and Committees.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	12474

**Output #2****Output Measure**

- Number of youth and adult partnership teams trained at workshops, conferences, summits.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	15

**Output #3****Output Measure**

- Number of community service grants awarded through the Missouri 4-H Foundation.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	24

**Output #4****Output Measure**

- Number of youth in civic leadership roles.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	12

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	12,000 youth will engage and complete 4-H leadership roles.
2	70% of the sample of 400 youth who have participated in state 4-H educational events or fulfilled leadership roles will report incorporating skills in other educational and/or leadership situations.



**Outcome #1****1. Outcome Measures**

12,000 youth will engage and complete 4-H leadership roles.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	12474

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Developing the leadership skills of youth builds their capacity to resolve issues. As individual youth use leadership skills in groups and organizations, the capacity to resolve community issues increases. Building skills and engaging youth to use these skills builds viable communities.

**What has been done**

4-H Youth Development provides opportunities for children and youth to lead in various organizational roles on the local, county, state and national levels. The opportunities include 4-H Club or Group officers, camp counselors, county councils and boards, regional teen leadership, and state 4-H council leadership. The goal of leadership in MU Extension 4-H Youth Development programs is to enhance the social, environmental and economic conditions of communities through youth leadership.

**Results**

12,474 youth engaged in 4-H Youth Development leadership roles. As a result, they learned teamwork, responsibility, accepting differences in others and how to make group decisions.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

70% of the sample of 400 youth who have participated in state 4-H educational events or fulfilled leadership roles will report incorporating skills in other educational and/or leadership situations.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	300	210

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Developing the leadership skills of youth builds their capacity to resolve issues. As individual youth use leadership skills in groups and organizations, the capacity to resolve community issues increases. Building skills and engaging youth to use these skills builds viable communities.

**What has been done**

4-H Youth Development provides opportunities for children and youth to lead in various organizational roles on the local, county, state and national levels. The opportunities include 4-H Club or Group officers, camp counselors, county councils and boards, regional teen leadership, and state 4-H council leadership. The goal of leadership in MU Extension 4-H Youth Development programs is to enhance the social, environmental and economic conditions of communities through youth leadership.

**Results**

210 4-H Youth reported, reflected and reported lessons learned in leadership, citizenship and project work in their award application and scholarship application. Information about social competency and leadership was measured on a sample of 347 youth completing the 4-H Study on Positive Youth Development. The information is being analyzed by faculty at Tuft's University and will be reported next year.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

Lack of adequate federal and state funding limits the number of master-level specialists employed throughout the states to create experiences for more children and youth to gain leadership and citizenship skills to enhance community viability.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- During (during program)
- Case Study

**Evaluation Results**

Multiple methods of evaluation are used by 4-H Youth Development faculty. These include reviewing products such as applications for awards or scholarships, and targeting a sample of our 4-H membership and non-4-H peers to participate in the 4-H Study on Positive Youth Development. Preliminary results of youth participating in the 4-H Study for Positive Youth development look promising, youth do report higher social competence and practicing leadership roles than the national average. More quantifiable results will be reported next year.

Quotes written by 4-H members in their Missouri Recognition Form include the following:

"These activities (community service) have helped me to develop empathy, kindness, caring and compassion for others."

"By being in 4-H, I learned a lot about making good decisions and following through with them. Other important skills are taught through different projects in 4-H such as time management."

### **Key Items of Evaluation**

Multiple methods of evaluation are used by 4-H Youth Development faculty. These include reviewing products such as applications for awards or scholarships, and targeting a sample of our 4-H membership and non-4-H peers to participate in the 4-H Study on Positive Youth Development. Preliminary results of youth participating in the 4-H Study for Positive Youth development look promising, youth do report higher social competence and practicing leadership roles than the national average. More quantifiable results will be reported next year.

Quotes written by 4-H members in their Missouri Recognition Form include the following:

“These activities (community service) have helped me to develop empathy, kindness, caring and compassion for others.”

“By being in 4-H, I learned a lot about making good decisions and following through with them. Other important skills are taught through different projects in 4-H such as time management.”

**Program #18****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Volunteer Development

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	9.0	0.0	0.0	0.0
<b>Actual</b>	7.7	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
488178	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

County, regional and state volunteer workshops and forums, Communications, Program management, Educational Design and Delivery, Interpersonal Skills, and Youth Development; Leadership roles of 4-H clubs, projects, county and state educational events, Letters to New Leaders, and Make the Best Better Modules; Web-based instruction; Youth Protection Policies and Procedures (Volunteer Screening).

**2. Brief description of the target audience**

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 5 - 19.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	11000	100	1000	0
2007	23963	89680	28265	72493

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	19	0	19

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- County, regional and state volunteer workshops and forums, Leadership roles of 4-H clubs, projects, county and state education

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	23963

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	5,000 adults and youth volunteers will increase knowledge and awareness of practices fostering positive youth development.
2	5,000 adult and youth volunteers apply practices of positive youth development through leadership roles.
3	Number of volunteers in local, county, regional and state 4-H leadership roles.
4	Number of volunteers attending workshops and/or forums for personal.
5	Number of volunteers completing Volunteers: The Foundation of Youth Development.
6	Number of volunteers screened prior to service.

**Outcome #1****1. Outcome Measures**

5,000 adults and youth volunteers will increase knowledge and awareness of practices fostering positive youth development.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	7013

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Volunteers: both adult and youth are the backbone of the Missouri 4-H Youth Development Programs. 4-H volunteers teach skills, manage the work of others, mentor youth, work with teachers and schools, coordinate county and state events. One hundred and thirty two faculty and staff could not provide 104,157 youth with quality developmental experiences without the 11,205 volunteers.

**What has been done**

Providing a variety of quality educational experiences for volunteers will result in individuals who feel competent and capable of providing experiences for both youth and other adults that promote positive youth development. Screening volunteers' background prior to service provides a safe environment for both youth and adults.

**Results**

23,963 volunteers (duplicates not removed) engaged in quality educational experiences to build their competence to work with youth to promote positive youth development.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

5,000 adult and youth volunteers apply practices of positive youth development through leadership roles.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	5000	11205

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Volunteers: both adult and youth are the backbone of the Missouri 4-H Youth Development Programs. 4-H volunteers teach skills, manage the work of others, mentor youth, work with teachers and schools, coordinate county and state events. One hundred and thirty two faculty and staff could not provide 104,157 youth with quality developmental experiences without the 11,205 volunteers.

#### **What has been done**

Providing a variety of quality educational experiences for volunteers will result in individuals who feel competent and capable of providing experiences for both youth and other adults that promote positive youth development.

#### **Results**

11,205 volunteers provided experiences through 4-H Youth Development for youth ages 5 to 18 to grow and thrive.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

#### **Outcome #3**

##### **1. Outcome Measures**

Number of volunteers in local, county, regional and state 4-H leadership roles.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	11205

##### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Volunteers: both adult and youth are the backbone of the Missouri 4-H Youth Development Programs. 4-H volunteers teach skills, manage the work of others, mentor youth, work with teachers and schools, coordinate county and state events. One hundred and thirty two faculty and staff could not provide 104,157 youth with quality developmental experiences without the 11,205 volunteers.

#### **What has been done**

Providing a variety of quality educational experiences for volunteers will result in individuals who feel competent and capable of providing experiences for both youth and other adults that promote positive youth development. Screening volunteers' background prior to service provides a safe environment for both youth and adults.

#### **Results**

11,205 volunteers were screened prior to providing experiences through 4-H Youth Development for youth ages 5 to 18 to grow and thrive.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

#### **Outcome #4**

##### **1. Outcome Measures**

Number of volunteers attending workshops and/or forums for personal.



**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	23963

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Volunteers: both adult and youth are the backbone of the Missouri 4-H Youth Development Programs. 4-H volunteers teach skills, manage the work of others, mentor youth, work with teachers and schools, coordinate county and state events. One hundred and thirty two faculty and staff could not provide 104,157 youth with quality developmental experiences without the 11,205 volunteers.

**What has been done**

Providing a variety of quality educational experiences for volunteers will result in individuals who feel competent and capable of providing experiences for both youth and other adults that promote positive youth development. Screening volunteers' background prior to service provides a safe environment for both youth and adults.

**Results**

23,963 volunteers (duplicates not removed) engaged in quality educational experiences to build their competence to work with youth to promote positive youth development.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #5****1. Outcome Measures**

Number of volunteers completing Volunteers: The Foundation of Youth Development.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Volunteers: both adult and youth are the backbone of the Missouri 4-H Youth Development Programs. 4-H volunteers teach skills, manage the work of others, mentor youth, work with teachers and schools, coordinate county and state events. One hundred and thirty two faculty and staff could not provide 104,157 youth with quality developmental experiences without the 11,205 volunteers.

**What has been done**

Providing a variety of quality educational experiences for volunteers will result in individuals who feel competent and capable of providing experiences for both youth and other adults that promote positive youth development. Screening volunteers' background prior to service provides a safe environment for both youth and adults. Beginning January 1, 2009, two criteria to be a 4-H volunteer will begin. The first criterion is to have a background check and the second is to complete an orientation. The first orientation began after June 30, 2007.

**Results**

Results of the number of volunteers completing Volunteers: The Foundation of Youth Development and the evaluation of their experiences, knowledge/skills gained will be shared in the 2008 MU Extension Report.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #6****1. Outcome Measures**

Number of volunteers screened prior to service.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	11205

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Volunteers: both adult and youth are the backbone of the Missouri 4-H Youth Development Programs. 4-H volunteers teach skills, manage the work of others, mentor youth, work with teachers and schools, coordinate county and state events. One hundred and thirty two faculty and staff could not provide 104,157 youth with quality developmental experiences without the 11,205 volunteers.

**What has been done**

Providing a variety of quality educational experiences for volunteers will result in individuals who feel competent and capable of providing experiences for both youth and other adults that promote positive youth development. Screening volunteers' background prior to service provides a safe environment for both youth and adults.

**Results**

11,205 volunteers were screened prior to providing experiences through 4-H Youth Development for youth ages 5 to 18 to grow and thrive.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**V(H). Planned Program (External Factors)**

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

#### **Brief Explanation**

Lack of adequate federal and state funding limits the number of master-level specialists employed throughout the states to create experiences for more children, youth and families to grow and thrive in 4-H. Volunteers: both adult and youth are the backbone of the Missouri 4-H Youth Development Programs. 4-H volunteers teach skills, manage the work of others, mentor youth, work with teachers and schools, coordinate county and state events. One hundred and thirty-two faculty and staff could not provide 104,157 youth with quality developmental experiences without the 11,205 volunteers.

### **V(l). Planned Program (Evaluation Studies and Data Collection)**

#### **1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Other (see below)

#### **Evaluation Results**

An extensive evaluation of the Volunteers: Foundations for Success orientation training, on-line course and DVD is underway. Results of the number of volunteers completing Volunteers: The Foundation of Youth Development and the evaluation of their experiences, knowledge/skills gained will be shared in the 2008 MU Extension Report.

#### **Key Items of Evaluation**

An extensive evaluation of the Volunteers: Foundations for Success orientation training, on-line course and DVD is underway. Results of the number of volunteers completing Volunteers: The Foundation of Youth Development and the evaluation of their experiences, knowledge/skills gained will be shared in the 2008 MU Extension Report.

**Program #19****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Improving Communications

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	3.7	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c 234579	1890 Extension	Hatch	Evans-Allen
	0	0	0
1862 Matching 0	1890 Matching 0	1862 Matching 0	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 0	1890 All Other 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Communication Toolkit: Fun Skill-Building Activities to do with Kids; Clowning project, judging, demonstration, exhibition; Public Speaking; Theatre Arts project, judging, demonstration, exhibition; Demonstration learning methodology; Oral reasons for project judging.

**2. Brief description of the target audience**

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 5 - 19.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1000	0	7000	0
2007	1062	1075	9978	1382

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

**Year      Target**  
**Plan:**    0  
 2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	3	0	3

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Number of youth enrolled in communication projects and educational events.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	9978

**Output #2****Output Measure**

- Attendance of project leaders at workshops for educational methods and communication projects.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	1062

**Output #3****Output Measure**

- Number of youth participating in camps, educational events and afterschool.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	2011

**Output #4****Output Measure**

- Number of hits on website.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	62

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	4,000 youth will competently demonstrate knowledge and skills gained through demonstrations, oral reasons and/or public speaking.
2	400 of the sample of youth who have participated in state 4-H educational events incorporating communications (oral reasons, demonstrations, public speaking, etc.) will report incorporating skills in other educational and/or leadership situations.

**Outcome #1****1. Outcome Measures**

4,000 youth will competently demonstrate knowledge and skills gained through demonstrations, oral reasons and/or public speaking.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	17763

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Communication skills by youth are essential for their contribution to the civic and economic leadership of communities. Missouri citizens expressed their wishes for youth to go on to higher education to gain knowledge, skills and experience, but lament fewer youth are returning to their home communities to provide civic and economic leadership.

**What has been done**

All 4-H Youth Development programs provide opportunities for youth learn and/or improve communication skills to enhance learning, foster interpersonal skills and facilitate leading groups. Experiences include project curricula, camps and educational events.

**Results**

17, 763 youth demonstrated competencies in communications through demonstrations, oral reasons, and/or public speaking in 4-H Youth Development educational events.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

400 of the sample of youth who have participated in state 4-H educational events incorporating communications (oral reasons, demonstrations, public speaking, etc.) will report incorporating skills in other educational and/or leadership situations.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	400	347

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Communication skills by youth are essential for their contribution to the civic and economic leadership of communities. Missouri citizens expressed their wishes for youth to go on to higher education to gain knowledge, skills and experience, but lament fewer youth are returning to their home communities to provide civic and economic leadership.

**What has been done**

All 4-H Youth Development programs provide opportunities for youth learn and/or improve communication skills to enhance learning, foster interpersonal skills and facilitate leading groups. Experiences include project curricula, camps and educational events.

**Results**

In the 4-H Camp Study representing over 300 youth and their families, the youth and parents report many positive comments on skills associated with Learning to Learn skill development. Youth and parents both named a number of specific new skills learned at camp. Youth in particular mentioned acquiring strategies for learning such as having confidence in their abilities to learn new things, finding a way to achieve their goals, getting organized, asking questions, and exhibiting perseverance. Youth and parents both noted an increased ability to pay attention and follow directions as well as the opportunity 4-H camp gave them for trying new activities.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

Lack of adequate federal and state funding limits the number of master-level specialists employed throughout the states to create experiences for more children and youth to gain communication skills.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- During (during program)
- Other (Educational Events)

**Evaluation Results**



194 4-H Camp Counselors in the summer of 2007 completed an extensive questionnaire, evaluating their own growth and experiences as a camp counselor. The questionnaire gathered both qualitative and quantitative data. The core of the questionnaire was the 70 questions of the Youth Experiences Survey (YES) 2.0 (2005), developed by Larson, Jarrett and Hansen; University of Illinois, and measured counselors' experiences in the following domains: Identity Experiences Initiative Experiences Basic Skills (such as dealing with temper, stress and improving academic skills) Interpersonal Relationships Teamwork and Social Skills Adult Networks and Social Capital Negative Experiences - The portion of the questionnaire developed by the Missouri design team gathered additional information such as demographics and involvement in other youth organizations. It also asked counselors to respond in terms of: The training and orientation they participated in as they prepared for their roles as camp counselors. The expectations of them as counselors versus their ability to carry them out. How the counselors gauged the level of their own importance in conducting 4-H Camp. The perceived value of their counseling experience to them personally. The study instrument and process were reviewed and approved by the MU campus Institutional Review Board. Counselors completed the questionnaire either at or near the end of their respective 2007 camp sessions. The instruments were gathered by MU Extension faculty/staff, who then forwarded them to the MU 4-H Center for 4-H Youth Development for data analysis. Results Following are a summary of responses to the 70 questions from the YES portion of the survey grouped by domain. A Group Mean close to 4.0 indicates the counselors responded that "yes definitely", they had positive experiences and had increased their skills and abilities in that domain. The low Group Mean in the "Negative Experiences" category indicates negative experiences occurred virtually "Not At All". Yes 2.0 Domains

Group Mean	Identity Experiences	3.43	Initiative Experiences
3.30	Basic Skills	2.72	Interpersonal Relationships
3.27	Adult Networks and Social Capital	2.91	Negative Experiences
1.27	Beyond the YES portion of the survey, camp counselors described accomplishments in the areas of leadership, public speaking, role modeling, teaching, helping campers have a positive experience, and making a connection with their campers.		

They also reported learning which of their own strategies didn't work for them as a camp counselor. They frequently mentioned learning that yelling and similar attempts at quieting campers and managing unruly behavior simply didn't work. By their own assessment, they wish they had been better prepared to lead activities and workshops, manage behavior (especially at lights-out), and be more familiar with the characteristics of the various developmental stages of children. They would like to increase their own personal skills in the areas of leadership, communication, and patience.

### Key Items of Evaluation

194 4-H Camp Counselors in the summer of 2007 completed an extensive questionnaire, evaluating their own growth and experiences as a camp counselor. The questionnaire gathered both qualitative and quantitative data. The core of the questionnaire was the 70 questions of the Youth Experiences Survey (YES) 2.0 (2005), developed by Larson, Jarrett and Hansen; University of Illinois, and measured counselors' experiences in the following domains: Identity Experiences Initiative Experiences Basic Skills (such as dealing with temper, stress and improving academic skills) Interpersonal Relationships Teamwork and Social Skills Adult Networks and Social Capital Negative Experiences - The portion of the questionnaire developed by the Missouri design team gathered additional information such as demographics and involvement in other youth organizations. It also asked counselors to respond in terms of: The training and orientation they participated in as they prepared for their roles as camp counselors. The expectations of them as counselors versus their ability to carry them out. How the counselors gauged the level of their own importance in conducting 4-H Camp. The perceived value of their counseling experience to them personally. The study instrument and process were reviewed and approved by the MU campus Institutional Review Board. Counselors completed the questionnaire either at or near the end of their respective 2007 camp sessions. The instruments were gathered by MU Extension faculty/staff, who then forwarded them to the MU 4-H Center for 4-H Youth Development for data analysis. Results Following are a summary of responses to the 70 questions from the YES portion of the survey grouped by domain. A Group Mean close to 4.0 indicates the counselors responded that "yes definitely", they had positive experiences and had increased their skills and abilities in that domain. The low Group Mean in the "Negative Experiences" category indicates negative experiences occurred virtually "Not At All". Yes 2.0 Domains

Group Mean	Identity Experiences	3.43	Initiative Experiences
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1.27	Beyond the YES portion of the survey, camp counselors described accomplishments in the areas of leadership, public speaking, role modeling, teaching, helping campers have a positive experience, and making a connection with their campers. They also reported learning which of their own strategies didn't work for them as a camp counselor. They frequently mentioned learning that yelling and similar attempts at quieting campers and managing unruly behavior simply didn't work. By their own assessment, they wish they had been better prepared to lead activities and workshops, manage behavior (especially at lights-out), and be more familiar with the characteristics of the various developmental stages of children. They would like to increase their own personal skills in the areas of leadership, communication, and patience.		

**Program #20****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Building Environments

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
605	Natural Resource and Environmental Economics	3%			
608	Community Resource Planning and Development	2%			
723	Hazards to Human Health and Safety	5%			
804	Human Environmental Issues Concerning Apparel, Textiles, ;	90%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	4.0	0.0	0.0	0.0
<b>Actual</b>	5.6	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
368062	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Conduct hands-on workshops for builders and consumers. Assemble and maintain relevant website and guidesheet information. Create a comprehensive Missouri Guide to Green Buildings. Encourage and support involvement in state, county, and local governments and agencies supporting energy-efficient, green buildings and homes. Assemble and maintain relevant website and guidesheet information on indoor air quality, home pollutants, home safety, and disaster preparedness. Maintain curriculum for K-12 schools and at-risk families. Encourage and support involvement in state, county, and local governments and agencies supporting healthy homes and disaster preparedness. Assemble and maintain relevant website and guidesheet information on housing types, maintenance, renting, home financial management and development. Develop curriculum for advocacy groups, housing agencies and nonprofit organizations. Encourage and support involvement in housing coalitions and agencies.

**2. Brief description of the target audience**

Government Emergency management departments; Health Agencies; Medical groups and agencies; Day care providers; 4-H programs and Family and consumer science educators; Landlords and tenants; Builders and contractors; Real estate agents and brokers; K-12 educators, students, school districts; Consumers of home appliances; Do-it-yourself consumers; Business owners; Non-profit Energy and Ecological Organizations; Energy Cooperatives and Utilities; First Time Homebuyers; Existing and Long-term Homeowners; Non-profit Housing Agencies; Government and State Housing Directors.

### V(E). Planned Program (Outputs)

#### 1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	2300	25000	350	0
2007	16232	444	285	182

#### 2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year	Target
Plan:	0
2007 :	0

Patents listed

#### 3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

### V(F). State Defined Outputs

Output Target

**Output #1****Output Measure**

- Number of workshops.

Year	Target	Actual
2007	0	71

**Output #2****Output Measure**

- Number of newsletter articles.

Year	Target	Actual
2007	0	0

**Output #3****Output Measure**

- Number of radio spots.

Year	Target	Actual
2007	0	0

**Output #4****Output Measure**

- Number of one-on-one counseling sessions.

Year	Target	Actual
2007	0	0

**Output #5****Output Measure**

- Number of unique website visits.

Year	Target	Actual
2007	0	61006

**Output #6****Output Measure**

- Number of participant contacts.

Year	Target	Actual
2007	0	3473

**Output #7****Output Measure**

- Number of students reached.

Year	Target	Actual
2007	0	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Percent of participants who have a home disaster preparedness plan.
2	Percent of participants who secure funding to purchase a home.
3	Percent of participants who indicate they feel able to maintain their home.
4	Percent of participants who have implemented energy conservation technologies.

**Outcome #1****1. Outcome Measures**

Percent of participants who have a home disaster preparedness plan.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The program uses extension specialists, government entities and housing agencies to serve as educators and facilitators to enable community residents and agencies to successfully develop, maintain, and monitor quality, affordable, healthy and sustainable housing in their area.

**What has been done**

The Built Environment is a consumer and professional education program about available and affordable housing options (including programs geared toward first-time homebuyers), housing quality, landlord - tenant relations, long-term home maintenance, healthy indoor air quality, healthy homes, home safety, home disaster preparedness (fire, weather, security), and promoting environmentally-sensitive and energy-efficient homes and buildings in Missouri.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

**Outcome #2****1. Outcome Measures**

Percent of participants who secure funding to purchase a home.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

**What has been done****Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

**Outcome #3****1. Outcome Measures**

Percent of participants who indicate they feel able to maintain their home.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	82

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The program uses extension specialists, government entities, and housing agencies, to serve as educators and facilitators to enable community residents and agencies to successfully develop, maintain and monitor quality, affordable, healthy and sustainable housing in their area.

**What has been done**

The Built Environment is a consumer and professional education program about available and affordable housing options (including programs geared toward first-time homebuyers), housing quality, landlord - tenant relations, long-term home maintenance, healthy indoor air quality, healthy homes, home safety, home disaster preparedness (fire, weather, security), and promoting environmentally-sensitive and energy-efficient homes and buildings in Missouri.

**Results**

Eighty-two percent of those attending home maintenance programs indicated they felt they would have the skills needed to maintain their home.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

**Outcome #4****1. Outcome Measures**

Percent of participants who have implemented energy conservation technologies.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation****V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- Before-After (before and after program)
- During (during program)
- Case Study

**Evaluation Results****Key Items of Evaluation**



**Program #21****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Parenting

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	4.0	0.0	0.0	0.0
<b>Actual</b>	9.2	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
600760	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Conduct workshops and multi-sessions programs; develop curriculum and educational resources, including print and web materials; provide training; work with media; partnering with other agencies and states.

**2. Brief description of the target audience**

Parents or others acting in a parenting role (e.g., grandparents, other relatives, foster parents).

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1000	5000	0	0
2007	9557	2273	628	36

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**

**Output #1****Output Measure**

- Number of classes/workshops provided (face-to-face or web).

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	176

**Output #2****Output Measure**

- Number of individual questions answered.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	100

**Output #3****Output Measure**

- Number of newsletters distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #4****Output Measure**

- Number of website visitors.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	388216

**Output #5****Output Measure**

- Number of in-service trainings provided.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Percent of participants who show increased knowledge of appropriate parenting practices (as defined by NEPEM).
2	Number of participants who have adopted appropriate parenting practices (as defined by NEPEM).
3	Reduction in child abuse and neglect.

**Outcome #1****1. Outcome Measures**

Percent of participants who show increased knowledge of appropriate parenting practices (as defined by NEPEM).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	100

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

During the Missouri Plan of Work process, 78 counties identified a need for parenting programs. The counties identified a wide range of parents and others acting in a parenting role (e.g., divorced parents, grandparents who are parenting, young parents, low-income parents, etc.) who need support and resources to develop better parenting skills.

**What has been done**

The Parenting program includes multiple curricula and delivery methods designed to increase parents' knowledge and adoption of appropriate parenting practices, as defined by the National Extension Parent Education Model (NEPEM), with a long-term goal of reduced child abuse and neglect.

**Results**

Of the program participants evaluated, all reported being more aware of appropriate parenting techniques. One particular group indicated learning the difference between discipline and punishment.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #2****1. Outcome Measures**

Number of participants who have adopted appropriate parenting practices (as defined by NEPEM).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

During the Missouri Plan of Work process, 78 counties identified a need for parenting programs. The counties identified a wide range of parents and others acting in a parenting role (e.g., divorced parents, grandparents who are parenting, young parents, low-income parents, etc.) who need support and resources to develop better parenting skills.

#### **What has been done**

The Parenting program includes multiple curricula and delivery methods designed to increase parents' knowledge and adoption of appropriate parenting practices, as defined by the National Extension Parent Education Model (NEPEM), with a long-term goal of reduced child abuse and neglect.

#### **Results**

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

#### **Outcome #3**

##### **1. Outcome Measures**

Reduction in child abuse and neglect.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Condition Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

#### **V(H). Planned Program (External Factors)**

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

**V(I). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals,group,organizations) and non-participants

**Evaluation Results**

**Key Items of Evaluation**

**Program #22****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Strengthening Families

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	60%			
806	Youth Development	40%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	6.0	0.0	0.0	0.0
<b>Actual</b>	12.3	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
0	0	0	0
<b>1862 Matching</b>	<b>1890 Matching</b>	<b>1862 Matching</b>	<b>1890 Matching</b>
803533	0	0	0
<b>1862 All Other</b>	<b>1890 All Other</b>	<b>1862 All Other</b>	<b>1890 All Other</b>
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Conduct workshops, multi-session programs and meetings; develop products, curriculum and resources; provide training; work with media; partnering with other agencies and with other state extensions.

**2. Brief description of the target audience**

Adults, parents, teens, childcare providers, grandparents, foster parents, professionals, teachers, agency educators, youth ages 5-12.



**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	3000	10000	2000	2500
2007	20061	188088	18322	8753

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**

**Output #1****Output Measure**

- Number of workshops, multi-session programs, fairs, and conferences.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	436

**Output #2****Output Measure**

- Number of newsletters and media programs.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #3****Output Measure**

- Number of professional childcare providers and agency educators trained.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #4****Output Measure**

- Number of website visits.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	331269

**Output #5****Output Measure**

- Number of individual questions answered (through email, phone, etc).

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	100

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Number of participants reporting improved family relationships.
2	Increased percent of professionals trained.
3	Number of participants who increased their knowledge of appropriate strengthening families practices.
4	Percent of participants reporting improved family communication.

**Outcome #1****1. Outcome Measures**

Number of participants reporting improved family relationships.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In 2005, University of Missouri Extension conducted a Plan of Work process to assess what Extension should focus on for the next five years. Councils, public members, and Extension faculty gave their thoughts on what Extension needs to do. Families, Parenting, and Socialization were one theme that surfaced as an important focus (e.g., family health and well-being of children and teens from the phone surveys).

**What has been done**

The Strengthening Families Planned Program has provided families and professionals information and skills to strengthen families in their relationships, interactions, and communications.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #2****1. Outcome Measures**

Increased percent of professionals trained.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In 2005, University of Missouri Extension conducted a Plan of Work process to assess what Extension should focus on for the next five years. Councils, public members, and Extension faculty gave their thoughts on what Extension needs to do. Families, Parenting, and Socialization were one theme that surfaced as an important focus (e.g., family health and well-being of children and teens from the phone surveys).

**What has been done**

The Strengthening Families Planned Program has provided families and professionals information and skills to strengthen families in their relationships, interactions, and communications.

**Results****4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

**Outcome #3****1. Outcome Measures**

Number of participants who increased their knowledge of appropriate strengthening families practices.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In 2005, University of Missouri Extension conducted a Plan of Work process to assess what Extension should focus on for the next five years. Councils, public members, and Extension faculty gave their thoughts on what Extension needs to do. Families, Parenting, and Socialization were one theme that surfaced as an important focus (e.g., family health and well-being of children and teens from the phone surveys).

**What has been done****Results****4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

**Outcome #4****1. Outcome Measures**

Percent of participants reporting improved family communication.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In 2005, University of Missouri Extension conducted a Plan of Work process to assess what Extension should focus on for the next five years. Councils, public members, and Extension faculty gave their thoughts on what Extension needs to do. Families, Parenting, and Socialization were one theme that surfaced as an important focus (e.g., family health and well-being of children and teens from the phone surveys).

**What has been done**

The Strengthening Families Planned Program has provided families and professionals information and skills to strengthen families in their relationships, interactions, and communications.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation****V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- During (during program)

**Evaluation Results****Key Items of Evaluation**

**Program #23****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Building Better Childcare for Missouri

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	2.0	0.0	0.0	0.0
<b>Actual</b>	7.2	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
472505	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Conduct workshops and multi-session programs; Develop products, curriculum, and resources; Provide training for other professionals; Partner with other state agencies and organizations.

**2. Brief description of the target audience**

Individuals who provide non-parental care to children ages birth through school entry such as center- and home-based childcare providers, Head Start and Early Head Start teachers, public-school preschool educators, and parent educators.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	200	1000	0	0
2007	5969	10947	26526	7730

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

**Year      Target**  
**Plan:**    0  
 2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Number of classes and workshops offered.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	151

**Output #2****Output Measure**

- Number of participants attending classes and workshops.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	2565

**Output #3****Output Measure**

- Number of newsletters distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #4****Output Measure**

- Number of visits to childcare website.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	46429



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Percent increase in awareness of developmentally appropriate learning environments and activities.
2	Higher quality learning environments and activities will be implemented.
3	Percent of Missouri children better prepared for school.

**Outcome #1****1. Outcome Measures**

Percent increase in awareness of developmentally appropriate learning environments and activities.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	70

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The quality of child care nationwide is suffering. Because so many families with young children rely on child care so they can work, every effort to improve the situation benefits young children and their families. Moreover, a high quality system of child care supports the economic development of Missouri.

**What has been done**

Missouri's "Build Better Child Care" program improves child care quality via research-based educational workshops that focus on developmentally - appropriate strategies for getting along with children and arranging learning environments.

**Results**

Seventy program participants evaluated reported gaining more knowledge of age appropriate activities they could use in their child care centers.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #2****1. Outcome Measures**

Higher quality learning environments and activities will be implemented.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	70

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The quality of child care nationwide is suffering. Because so many families with young children rely on child care so they can work, every effort to improve the situation benefits young children and their families. Moreover, a high quality system of child care supports the economic development of Missouri.

**What has been done**

Missouri's "Build Better Child Care" program improves child care quality via research-based educational workshops that focus on developmentally - appropriate strategies for getting along with children and arranging learning environments.

**Results**

Seventy child care training participants reported they intended to implement age appropriate activities in their child care centers.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #3****1. Outcome Measures**

Percent of Missouri children better prepared for school.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

**Brief Explanation**

**V(l). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- Before-After (before and after program)

**Evaluation Results**

**Key Items of Evaluation**

**Program #24****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Food Safety

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
712	Protect Food from Contamination by Pathogenic Microorgani	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	1.0	0.0	0.0	0.0
<b>Actual</b>	8.9	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
581323	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Number of Curriculum developed; Number of individual inquiries responded to; Number of trainings for large groups; Number of smaller workshops; Number of guide sheets written; Number of newsletter articles written; Number of media interviews held.

**2. Brief description of the target audience**

Pre K–12th grade students, food stamp individuals and households, general adults, older adults, nursing home assistants, daycare providers.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	100	5000	5000	0
2007	5295	14719	42	772

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**

**Output #1****Output Measure**

- Curriculum.

Year	Target	Actual
2007	0	0

**Output #2****Output Measure**

- Individual inquiries.

Year	Target	Actual
2007	0	0

**Output #3****Output Measure**

- Trainings for large groups.

Year	Target	Actual
2007	0	671171

**Output #4****Output Measure**

- Smaller workshops.

Year	Target	Actual
2007	0	65

**Output #5****Output Measure**

- Guide sheets.

Year	Target	Actual
2007	0	0

**Output #6****Output Measure**

- Newsletter articles.

Year	Target	Actual
2007	0	0

**Output #7****Output Measure**

- Media interviews.

Year	Target	Actual
2007	0	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increased knowledge of proper hand washing.
2	Increased knowledge of cooking foods adequately.
3	Increased knowledge of avoiding cross-contamination.
4	Increased knowledge of keeping food at a safe temperature.
5	Increased knowledge of storing foods properly.
6	% or # of individuals who indicate an intent to adopt one or more safe food handling practices.
7	Increased practice of personal hygiene.
8	Increased careful food handling practices.
9	Percent of individuals who indicate using desirable food handling behaviors.



**Outcome #1****1. Outcome Measures**

Increased knowledge of proper hand washing.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The need is to protect food from contamination by pathogenic microorganisms, parasites, and naturally occurring toxins. Current data indicates a large portion of the population is improperly and unsafely handling food in the home leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses per year with 325,000 cases resulting in hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, daycare providers, etc.

**What has been done**

The approach to food safety education involves answering consumer questions and teaching safe food handling concepts within the Family Nutrition Education Program curriculum. Opportunities for programming regarding food safety happen throughout the state. Programs include but are not limited to occasional quantity cooks, FNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

**Results**

Of 3,329 teachers surveyed, they indicated 82% of their students improved their hand washing skills and behaviors after participating in the Food Stamp Nutrition Education Program. With an average of thirty (30) children per classroom, that is over 81,500 children who demonstrated marked improvement.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

**Outcome #2****1. Outcome Measures**

Increased knowledge of cooking foods adequately.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The need is to protect food from contamination by pathogenic microorganisms, parasites, and naturally occurring toxins. Current data indicates a large portion of the population is improperly and unsafely handling food in the home leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses per year with 325,000 cases resulting in hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, daycare providers, etc.

**What has been done**

The approach to food safety education involves answering consumer questions and teaching safe food handling concepts within the Family Nutrition Education Program curriculum. Opportunities for programming regarding food safety happen throughout the state. Programs include but are not limited to occasional quantity cooks, FNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

**Outcome #3****1. Outcome Measures**

Increased knowledge of avoiding cross-contamination.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The need is to protect food from contamination by pathogenic microorganisms, parasites, and naturally occurring toxins. Current data indicates a large portion of the population is improperly and unsafely handling food in the home leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses per year with 325,000 cases resulting in hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, daycare providers, etc.

**What has been done**

The approach to food safety education involves answering consumer questions and teaching safe food handling concepts within the Family Nutrition Education Program curriculum. Opportunities for programming regarding food safety happen throughout the state. Programs include but are not limited to occasional quantity cooks, FNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
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**Outcome #4****1. Outcome Measures**

Increased knowledge of keeping food at a safe temperature.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	47

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The need is to protect food from contamination by pathogenic microorganisms, parasites, and naturally occurring toxins. Current data indicates a large portion of the population is improperly and unsafely handling food in the home leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses per year with 325,000 cases resulting in hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, daycare providers, etc.

**What has been done**

The approach to food safety education involves answering consumer questions and teaching safe food handling concepts within the Family Nutrition Education Program curriculum. Opportunities for programming regarding food safety happen throughout the state. Programs include but are not limited to occasional quantity cooks, FNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

**Results**

Forty-seven percent of EFNEP participants completing the program improved their behavior of not thawing foods at room temperature.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxi

**Outcome #5****1. Outcome Measures**

Increased knowledge of storing foods properly.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	51

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The need is to protect food from contamination by pathogenic microorganisms, parasites, and naturally occurring toxins. Current data indicates a large portion of the population is improperly and unsafely handling food in the home leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses per year with 325,000 cases resulting in hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, daycare providers, etc.

**What has been done**

The approach to food safety education involves answering consumer questions and teaching safe food handling concepts within the Family Nutrition Education Program curriculum. Opportunities for programming regarding food safety happen throughout the state. Programs include but are not limited to occasional quantity cooks, FNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

**Results**

Fifty-one percent of Food Stamp Nutrition Education adult participants evaluated improved their food storage practices and did not allow foods to sit out at room temperature for more than two hours.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

**Outcome #6****1. Outcome Measures**

% or # of individuals who indicate an intent to adopt one or more safe food handling practices.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	55

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The need is to protect food from contamination by pathogenic microorganisms, parasites, and naturally occurring toxins. Current data indicates a large portion of the population is improperly and unsafely handling food in the home leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses per year with 325,000 cases resulting in hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, daycare providers, etc.

**What has been done**

The approach to food safety education involves answering consumer questions and teaching safe food handling concepts within the Family Nutrition Education Program curriculum. Opportunities for programming regarding food safety happen throughout the state. Programs include but are not limited to occasional quantity cooks, FNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

**Results**

Five hundred fifty-five (555) of 1,019 EFNEP adult participants who completed the program (55%) improved one or more food handling practices.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

**Outcome #7****1. Outcome Measures**

Increased practice of personal hygiene.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results****4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

**Outcome #8****1. Outcome Measures**

Increased careful food handling practices.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done**

**Results****4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

**Outcome #9****1. Outcome Measures**

Percent of individuals who indicate using desirable food handling behaviors.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	25	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occuring Toxi

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation****V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

**Evaluation Results**

**Key Items of Evaluation**

**Program #25****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Personal Financial Management

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	8.0	0.0	0.0	0.0
<b>Actual</b>	7.7	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
504718	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

University of Missouri campus and regional specialist will: Work in partnership to identify audience needs; Develop appropriate curriculum and program strategies; and Evaluate the impact of the educational experiences. Delivery strategies will include: Workshops; One-on-one coaching sessions; Training for professionals and eldercare providers; Written materials; Educational packets; Newsletters; Newspaper articles; Radio and television spots; and Web-based informational tools.

**2. Brief description of the target audience**

General population, general adult population, low income families, unbanked consumers, consumers going through bankruptcy, youth from pre-school through high school, college students, young couples, divorcing couples, women, older individuals and the elderly (55 and beyond), and family agencies.



**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	1500	5000	200	400
2007	22032	31435	1780	1022

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**

**Output #1****Output Measure**

- Number of workshops.

Year	Target	Actual
2007	0	239

**Output #2****Output Measure**

- Number of radio spots.

Year	Target	Actual
2007	0	0

**Output #3****Output Measure**

- Number of one-on-one counseling sessions.

Year	Target	Actual
2007	0	100

**Output #4****Output Measure**

- Number of newsletter articles.

Year	Target	Actual
2007	0	0

**Output #5****Output Measure**

- Number of unique website visits.

Year	Target	Actual
2007	0	477579

**Output #6****Output Measure**

- Number of participant contacts.

Year	Target	Actual
2007	0	26022

**Output #7****Output Measure**

- Number of students reached.

Year	Target	Actual
2007	0	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increased knowledge of debt management.
2	Increased knowledge of the benefits of saving on a regular basis.
3	Increased knowledge of basic personal financial management.
4	# of participants who have reduced their debt.
5	# of participants who began saving on a regular basis.
6	# of participants who increased the amount of money they save regularly.
7	# of participants who have established financial goals to guide financial decisions.
8	Number of participants who check their credit report.
9	Percent of participants who understand their rights under the Fair Credit Reporting Act.

**Outcome #1****1. Outcome Measures**

Increased knowledge of debt management.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

**What has been done**

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #2****1. Outcome Measures**

Increased knowledge of the benefits of saving on a regular basis.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

**What has been done**

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #3****1. Outcome Measures**

Increased knowledge of basic personal financial management.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

**What has been done**

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #4****1. Outcome Measures**

# of participants who have reduced their debt.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

**What has been done**

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #5****1. Outcome Measures**

# of participants who began saving on a regular basis.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

**What has been done**

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

## Results

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

### Outcome #6

#### 1. Outcome Measures

# of participants who increased the amount of money they save regularly.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	67

#### 3c. Qualitative Outcome or Impact Statement

##### Issue (Who cares and Why)

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

##### What has been done

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

## Results

Sixty-seven percent (67%) of the participants taught in a series entitled Money 2007 reported increasing the amount of money they save on a regular basis in a follow-up evaluation six weeks after completing this program.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

### Outcome #7

#### 1. Outcome Measures

# of participants who have established financial goals to guide financial decisions.

#### 2. Associated Institution Types

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	100

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

**What has been done**

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

**Results**

One hundred percent (100%) of Money 2007 program participants had prepared written financial goals for themselves upon completing a six-week follow-up evaluation.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #8****1. Outcome Measures**

Number of participants who check their credit report.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

**What has been done**



Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

## Results

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

## Outcome #9

### 1. Outcome Measures

Percent of participants who understand their rights under the Fair Credit Reporting Act.

### 2. Associated Institution Types

•1862 Extension

### 3a. Outcome Type:

Change in Condition Outcome Measure

### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	25	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Increasingly, workers must rely on personal savings and private pensions for their retirement. As individuals increase their use of financial markets, it is critical they understand at least the basics of money management, saving, and investment.

#### What has been done

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school, and the elderly. This program area also addresses consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

## Results

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

## V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

**V(I). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

**Evaluation Results**

**Key Items of Evaluation**

**Program #26****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Nutrition, Health and Physical Activity

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	25%			
724	Healthy Lifestyle	50%			
806	Youth Development	25%			
<b>Total</b>		<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	15.0	0.0	0.0	0.0
<b>Actual</b>	19.4	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
0	0	0	0
<b>1862 Matching</b>	<b>1890 Matching</b>	<b>1862 Matching</b>	<b>1890 Matching</b>
1264654	0	0	0
<b>1862 All Other</b>	<b>1890 All Other</b>	<b>1862 All Other</b>	<b>1890 All Other</b>
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Use direct and indirect methods to provide education and targeted messages on nutrition, physical activity, and selfcare management. Some specific methods used will include group education, workshops, train-the-trainer strategies, newsletters, web-based education, and media efforts. In addition there will be community level interventions through partnerships that will be developed. This will include working with local coalitions to develop awareness campaigns.

**2. Brief description of the target audience**

Adults, youth ages 3 through 18, low-income Missourians, pregnant women, adults 55 and older, volunteers, teachers and community members, school teachers and nurses, other adults interested in improving their quality of life.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	15000	25000	200000	10000
2007	36346	14998	227682	14096

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**

**Output #1****Output Measure**

- Number of program participants (gender and ethnicity).

Year	Target	Actual
2007	0	226501

**Output #2****Output Measure**

- Number of programs held.

Year	Target	Actual
2007	0	7500

**Output #3****Output Measure**

- Number of newsletters distributed.

Year	Target	Actual
2007	0	815844

**Output #4****Output Measure**

- Number of partnerships formed.

Year	Target	Actual
2007	0	301

**Output #5****Output Measure**

- Number of community campaigns conducted.

Year	Target	Actual
2007	0	1

**Output #6****Output Measure**

- Number of PSAs developed.

Year	Target	Actual
2007	0	0

**Output #7****Output Measure**

- Number of PSAs used.

Year	Target	Actual
2007	0	0

**Output #8****Output Measure**

- Web usage.

Year	Target	Actual
2007	0	808770

**Output #9****Output Measure**

- Number of volunteers trained.

Year	Target	Actual
2007	0	581

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Improved attitudes about health eating and physical activity (percent).
2	Increased awareness/knowledge of physical activity recommendations for health (percent).
3	Increased awareness/knowledge of healthy food choices (percent).
4	Improved skill in selecting healthy foods (percent).
5	Increased self efficacy about managing chronic conditions.
6	Improve skill in preparation of healthy foods (percent).
7	Awareness among private and public sector leaders about nutrition related challenges of individuals and families.
8	Involvement of community groups to address nutrition challenges/issues of individuals and families.
9	Choose foods according to MyPyramid and the Dietary Guidelines.
10	Adopt one or more healthy food/nutrition practices.
11	Begin or increase physical activity.
12	Learner tries and accepts new foods.
13	Coalitions formed to address dietary quality and physical activity issues for individuals and families.
14	Increased adoption of healthy food practices.
15	Adoption of recommended diet-related practices for disease prevention and management.
16	Increase participation in regular physical activity.
17	Family/individual participation in community events that increase physical activity.
18	Identify barriers and enhancements to improve community diet quality and physical activity.
19	Increased community activities/facilities that encourage physical activity.
20	Improved behavior changes based on MyPyramid and the Dietary Guidelines.
21	Increased participation of individual/family in games and play that involve physical activity.
22	Reduction in time spent in sedentary activities.
23	Development of a written plan to address challenges and barriers to dietary quality and physical activity by community agencies and groups.

**Outcome #1****1. Outcome Measures**

Improved attitudes about health eating and physical activity (percent).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	95

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results**

Three thousand, three hundred forty-eight (3,348) teachers reported ninety-five percent (95%) of their students were more aware of nutrition and the importance of making healthy choices following their participation in the Food Stamp Nutrition Education Program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #2****1. Outcome Measures**

Increased awareness/knowledge of physical activity recommendations for health (percent).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #3****1. Outcome Measures**

Increased awareness/knowledge of healthy food choices (percent).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results**

Sixty-four percent of teachers who were evaluated through the Food Stamp Nutrition Education Program reported their students who participated in the program made healthier food choices following an average of six weekly lessons.



**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

**Outcome #4****1. Outcome Measures**

Improved skill in selecting healthy foods (percent).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	25	64

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results**

Of teachers reporting (3,329), they indicated sixty-four percent (64%) of their students made healthier food choices following participation in the Food Stamp Nutrition Education Program. With an average of thirty (30) children in each classroom, that is almost 62,000 children who demonstrated positive behavior changes.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

**Outcome #5****1. Outcome Measures**

Increased self efficacy about managing chronic conditions.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #6****1. Outcome Measures**

Improve skill in preparation of healthy foods (percent).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

## Results

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

## Outcome #7

### 1. Outcome Measures

Awareness among private and public sector leaders about nutrition related challenges of individuals and families.

### 2. Associated Institution Types

•1862 Extension

### 3a. Outcome Type:

Change in Knowledge Outcome Measure

### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

#### What has been done

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

## Results

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

## Outcome #8

### 1. Outcome Measures

Involvement of community groups to address nutrition challenges/issues of individuals and families.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	100

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results**

One hundred percent (100%) of six (6) community coalitions addressed dietary quality and physical activity needs of limited resource families.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #9****1. Outcome Measures**

Choose foods according to MyPyramid and the Dietary Guidelines.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done**

## Results

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

### Outcome #10

#### 1. Outcome Measures

Adopt one or more healthy food/nutrition practices.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	45

#### 3c. Qualitative Outcome or Impact Statement

##### Issue (Who cares and Why)

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

##### What has been done

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

##### Results

Forty-five percent (45%) of EFNEP adults completing the program reported they improved one or more healthy food practices.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

### Outcome #11

#### 1. Outcome Measures

Begin or increase physical activity.

#### 2. Associated Institution Types

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	1035

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results**

One thousand thirty-five (1,035) of two thousand five hundred sixty-one (2,561) EFNEP adult program participants reported they increased the amount of physical activity they engaged in over the average twelve-month duration of the program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #12****1. Outcome Measures**

Learner tries and accepts new foods.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	67

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results**

Over ninety-five percent (95%) of Food Stamp Nutrition Education Program youth who participated in taste testing reported they were likely to incorporate the foods sampled into their diet.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

**Outcome #13****1. Outcome Measures**

Coalitions formed to address dietary quality and physical activity issues for individuals and families.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results****4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

**Outcome #14**

**1. Outcome Measures**

Increased adoption of healthy food practices.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	83

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #15****1. Outcome Measures**

Adoption of recommended diet-related practices for disease prevention and management.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results



**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

**Outcome #16****1. Outcome Measures**

Increase participation in regular physical activity.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results**

Eighty-three percent of 411 EFNEP adult participants evaluated reported exercising for 30 minutes/day most days of the week.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

**Outcome #17****1. Outcome Measures**

Family/individual participation in community events that increase physical activity.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

**What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #18****1. Outcome Measures**

Identify barriers and enhancements to improve community diet quality and physical activity.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

**Outcome #19****1. Outcome Measures**

Increased community activities/facilities that encourage physical activity.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

**Outcome #20****1. Outcome Measures**

Improved behavior changes based on MyPyramid and the Dietary Guidelines.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	96

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

In Missouri, 62% of adults are overweight or obese, and 32% of 6-8th graders are overweight or at risk for becoming overweight. 80% of adults and 85% of youth consume less than 5 fruits and vegetables/day; and 84% of youth drank less than 3 glasses of milk/day. 55% of adults report they do not engage in 30 minutes of physical activity five or more days of the week. 72% of youth participated in insufficient physical activity, and 67% did not attend physical education class daily.

#### **What has been done**

Nutrition and health education has been provided for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management. Ongoing collaboration with community agencies and organizations, such as the Department of Elementary and Secondary Education and Department of Health and Senior Services, will be used to help promote educational programs.

#### **Results**

Over ninety-six percent (96%) of the 2,561 EFNEP adults made positive changes in one or more food groups.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

#### **Outcome #21**

##### **1. Outcome Measures**

Increased participation of individual/family in games and play that involve physical activity.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Action Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
703	Nutrition Education and Behavior

#### **Outcome #22**

##### **1. Outcome Measures**

Reduction in time spent in sedentary activities.

##### **2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**Outcome #23****1. Outcome Measures**

Development of a written plan to address challenges and barriers to dietary quality and physical activity by community agencies and groups.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
703	Nutrition Education and Behavior

**V(H). Planned Program (External Factors)**

External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Other (Participant self responsibility)

**Brief Explanation**

**V(I). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Other (Anecdotal success stories)

**Evaluation Results**

**Key Items of Evaluation**

**Program #27****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Facilitating Community Decision Making for Youth and Adults

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	25%			
609	Economic Theory and Methods	10%			
610	Domestic Policy Analysis	25%			
803	Sociological and Technological Change Affecting Individuals,	25%			
805	Community Institutions, Health, and Social Services	10%			
806	Youth Development	5%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	7.0	0.0	0.0	0.0
<b>Actual</b>	6.3	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
427505	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Form planning committees/advisory panels, facilitate participatory visioning and planning workshops, moderate local issues forums, train moderators and conveners for forums and issue framing, hold community meetings and conduct presentations, gather data and use decision-support tools to analyze alternatives for the community with citizens and decision makers, work with communities to address a specific need or issue. Also work with media; provide analysis, training and consultation for local and state government; work with local officials to provide classroom training for middle school students; facilitate project planning and local government field trips with middle schoolers; and conduct project fairs and other events to highlight middle school learning and civic engagement projects.

**2. Brief description of the target audience**

Targeted audience would be all social groups in the community, including low-income and minority, youth (age 12-14), adults, community leaders, local government and policy making groups, and state and local agencies. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc.

**V(E). Planned Program (Outputs)****1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	14000	35000	1000	5000
2007	30249	21070	1142	1128

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
Plan:	0
2007 :	0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	Extension	Research	Total
<b>Plan</b>			
2007	0	4	4

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Number of partners.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	30	225

**Output #2****Output Measure**

- Number of volunteers who assisted.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	440	388

**Output #3****Output Measure**

- Number of communities/organizations using deliberative processes to dialogue or frame public issues.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	20	13



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increased participation and diversity; % of participants reporting they feel they have an increased voice and opportunity to participate in the community.
2	Awareness of need to develop or update plan.
3	Awareness of need for increased participation and diversity.
4	Increased knowledge, understanding, and skills.
5	Plan/project implementation.
6	Local officials take actions that increase citizen participation.
7	Increased civic engagement in deliberating public issues. Number of communities/organizations using deliberative processes at least twice per year to inform decision making processes.
8	Increased capacity to deal with future issues.
9	Change in community practice.
10	Improved community fiscal and economic performance.
11	Citizens of varying cultures increase their participation and engagement in local government and in the community.
12	Sustained capacity for informed local decision making.
13	Group or organizational sustainability.
14	Development or update of plan.
15	Increased partnerships and resources.
16	Evidence of community goal attainment.
17	% of citizens reporting increased volunteering/engagement in local government, civic organizations, schools, and informal arrangements (including citizens seek public office).

**Outcome #1****1. Outcome Measures**

Increased participation and diversity; % of participants reporting they feel they have an increased voice and opportunity to participate in the community.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Local officials want to serve citizens and local citizens want to contribute to and improve their community. Participation is the foundation of democracy. Citizens who are encouraged to participate are more likely to contribute to the community both in actions and contributions.

**What has been done**

Programs encourage diversity of participation to reflect the make up of the community - not just racial and ethnic or gender diversity.

**Results**

Baseline data have been collected this year.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

**Outcome #2****1. Outcome Measures**

Awareness of need to develop or update plan.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	8

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Local officials wish to implement what citizens want. Organizations want to improve services to clientele. Citizens want input into the local community or into an organization of which they are a member or are clientele. Awareness needs to exist before action is taken. Funding organizations require a proposal show relation to a plan. Planning is important for actions to happen in the needed sequence in order for there to be a successful outcome.

#### **What has been done**

A variety of planning assistance has been offered - facilitation, technical assistance, training about planning. Planning awareness ranges from an organization setting its vision and strategic plan, to communities planning specific projects, community comprehensive plans, community formal planning and zoning and a community planning for both positive and negative economic events in the community.

#### **Results**

Officials of 6 communities and members of 2 regional organizations have increased awareness of the need for planning. Gentry County is planning for the expansion of wind power and the closure of a manufacturer, both of which will affect jobs, commercial and residential real estate. Four cities (Ashland, Hannibal, Battlefield and a city in Henry County) are updating comprehensive plans. The Mid-Missouri Regional Board of Realtors understands pros and cons of planning. Palmyra's Community Betterment process resulted in three new organizations that are developing plans. Canton used the Community Betterment process to develop its plan.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

#### **Outcome #3**

##### **1. Outcome Measures**

Awareness of need for increased participation and diversity.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Local officials want to serve the citizens well and local citizens want to contribute to and improve their community. Participation is the foundation of democracy. Citizens who are encouraged to participate are more likely to contribute to the community both in actions and contributions.

##### **What has been done**

Surveys have been conducted to get feedback and ideas from citizens. In one case, a study of access conditions at the Courthouse was conducted. Technical assistance has been provided to local boards about participation techniques. Group facilitation services have been provided.

##### **Results**

Three cities and 1 regional organization have demonstrated increased awareness of the need for increased participation and diversity. A city in Henry County used a survey to increase citizen input into planning. The Bonne Femme Watershed steering committee instituted a new way to increase stakeholder input for management of the watershed. The mayor of Palmyra instituted a youth board. Herculaneum used surveys, community meetings, and participatory planning to increase citizen participation.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #4****1. Outcome Measures**

Increased knowledge, understanding, and skills.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Without increased knowledge and understanding, citizens, leaders and communities will only continue to respond in old ways even though the environment and situation have changed. The ability to respond appropriately to change is enhanced. Youth who understand civic engagement are critical for community participation.

**What has been done**

Seminar on watershed management, information on incorporation implications, data on website and surveys implemented to provide information to local officials. Seminars on planning pros and cons, planning laws - county and city. Providing information on what public officials may and may not do. Facilitating focus groups and public meetings. Citizenship Education Clearing House (CECH-UP), program for middle schools on local government, teacher awareness of program, teacher training and student awareness increases.

**Results**

10 communities and 4 regional organizations show changes in knowledge, understanding and skills. CECH-UP (local government education for middle school students) provided teacher training and at least 5 new school programs were started. Holt and Clay County commissioners increased their knowledge of watershed management, county demographics and economics. Ivy Bend citizens understand the tax consequences of incorporating or not. Clay County Health Department: seniors' social interactions/isolation. Regional Board of Realtors: planning pros and cons. Bonne Femme Watershed Committee: how stakeholders understand issues. Mid-Missouri planners: statute differences for county and city planning, types of county planning and proposed changes to statutes. Atchison County: counties cannot enter into a bi-state contract. 5 counties in NW: CAFO issues and rules. NW Regional Council of Governments: water issues. Teacher awareness and knowledge of CECH-UP and student knowledge of local government.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities
610	Domestic Policy Analysis
806	Youth Development
805	Community Institutions, Health, and Social Services

**Outcome #5****1. Outcome Measures**

Plan/project implementation.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	6

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Local officials wish to implement what citizens want. Organizations want to improve services to clientele. Citizens want input into the community or an organization of which they are a member or clientele. Plans are important as guides for future activity. They serve very little purpose if they are merely written and do not serve as a guide for future community action.

**What has been done**

Training on planning and technical assistance on planning and implementation.

**Results**

Five communities and 1 organization implemented plans. Herculaneum is implementing its comprehensive plan. A new city administrator is using the plan as his job description. Canton has begun 16 projects since finishing its plan. A skate park and trail development have occurred in Hannibal. Clarksville is implementing a housing plan. Palmyra area community betterment resulted in three new organizations that developed plans. One organization received a grant to implement its plan.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

**Outcome #6****1. Outcome Measures**

Local officials take actions that increase citizen participation.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #7****1. Outcome Measures**

Increased civic engagement in deliberating public issues. Number of communities/organizations using deliberative processes at least twice per year to inform decision making processes.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	5	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As public issues become more complex and impact a greater number of citizens, people need new ways to dialogue and engage in public discourse that builds the capacity of community members to work through public issues. Through public deliberation, people are provided new knowledge and skills to identify and frame public issues and to convene and facilitate local deliberative processes. The ability of the community to discuss difficult issues allows more voices to be heard and allows communities to work through issues.

**What has been done**

19 public issues forums were held around the state.

**Results**

Public deliberation forums being considered for local school systems in Kansas City, MO area for dialogues about diversity and other volatile issues. Public forums in Northeast Missouri identified issues critical to work force development: increased educational opportunities (community colleges, vocational education), communication skills to enter work force, and retaining skilled labor and paying higher wages. Local results fed into a regional report. In public forums on ways to increase participation in democracy, citizens identified the importance of increasing civic engagement and having public discussions. After moderator training for public deliberation, participants said: "Immediately following both days of the workshops, we found ourselves discussing forums we would like to put on ourselves, and eventually, teaching our corps on how to facilitate and moderate productive forums." "One thing I plan to do as a result of this session is to share what I learned with others, and set up a forum for local issues. Maybe even talk the Greene County Commission into having you do a series of forums on upcoming issues. It was a good training session."

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
805	Community Institutions, Health, and Social Services
610	Domestic Policy Analysis
803	Sociological and Technological Change Affecting Individuals, Families and Communities
608	Community Resource Planning and Development

**Outcome #8****1. Outcome Measures**

Increased capacity to deal with future issues.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	4

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increased capacity of local officials can result in a more effectively managed community with the ability to deal with issues as they arise. It is also likely to result in a more harmonious community. Increased capacity means officials have the ability to learn and then to apply and update that learning in new situations.

**What has been done**

We provided research about Concentrated Animal Feeding Operations (CAFOs) to 5 counties in Northwest Missouri. We provided technical and facilitation assistance for comprehensive planning and planning for housing. We developed poll worker training materials, and partnered in training delivery.

**Results**

Northwest Missouri officials report they have a better understanding of state statutes about CAFOs, and this will affect their decision process in the future.

Two communities and 2 regional organizations have demonstrated increased capacity to deal with future issues.

Herculaneum citizens can now work together and could not before.

NE Missouri has several new housing projects in small towns.

Clarksville is building on its previous successes to increase housing.

1200 poll workers were trained and demonstrated capacity to deal with issues that arise at the polls.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
608	Community Resource Planning and Development

**Outcome #9****1. Outcome Measures**

Change in community practice.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	7

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Local officials and citizens are concerned. As the world changes, how communities interact and implement must change to be effective in addressing the new context.

**What has been done**

Technical assistance for planning was provided, and training materials were developed. Vision to Action: Take Charge Too was used to assist communities in planning and also training provided to others in conducting planning. We worked with communities in the Community Betterment assessment process. Grant writing assistance was provided. Training materials were developed for poll workers.

**Results**

7 communities showed changes in practices. A state-wide training program for poll workers also changed practices in election sites. Three cities are updating an outdated comprehensive plan. Palmyra is now recycling up to 10% of its wastes, and Hannibal started a recycling program as a result of its planning. Palmyra is offering more community arts programs. Herculaneum is no longer a community divided and views can be expressed publicly without rancor. Citizens and the community are able to resolve old zoning issue without resorting to courts. Use of training materials resulted in changes both in how poll workers are trained and in procedures on election day.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
608	Community Resource Planning and Development

**Outcome #10****1. Outcome Measures**

Improved community fiscal and economic performance.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Local officials and citizens care. Economic performance includes jobs and income for citizens. Fiscal performance includes the relationships between tax bases, tax revenues, demand for public services and costs of public services. The fiscal capacity is that ideally the community can meet the demands of the majority of its citizens with a "reasonable" level of taxes.

**What has been done**

Mediation between county and a non-profit organization. Presentations on taxes and factors affecting tax revenues; options for economic development financing and basics of state and local tax structure and burden. Analysis of impacts of conservation projects and agriculture, economic and water quality impacts of agricultural, recreational activities and bio power. Models to determine economically efficient biofuels.

**Results**



Madison County retained 48 jobs and funding for a sheltered workshop.

Many of the applied studies above have been used for policy debates.

County treasurers provided county commissioners with estimates of tax revenues from use taxes. Several counties are in discussion of whether to put a use tax before the voters (it must be voter approved).

Boone County Commissioners used sales tax information in extensive budget discussions and in revenue-sharing discussions with cities in the county. Local newspapers carried 5 stories that informed the public.

Missouri Department of Natural Resources is using the information on impact of conservation projects to review option to ask for a sales tax renewal.

Economic and physical information was used by producers and others in the Upper White River watershed to make decisions regarding water quality improvement plans in their area.

Study of agriculture's importance to the economy is being used in policy discussions.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
803	Sociological and Technological Change Affecting Individuals, Families and Communities

### Outcome #11

#### 1. Outcome Measures

Citizens of varying cultures increase their participation and engagement in local government and in the community.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Condition Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

#### 3c. Qualitative Outcome or Impact Statement

##### Issue (Who cares and Why)

Local officials want to serve citizens and local citizens want to contribute to and improve their community.

Participation is the foundation of democracy. Citizens who are encouraged to participate are more likely to contribute to the community both in actions and contributions.

##### What has been done

Technical assistance has been provided to local boards about participation techniques. Group facilitation services have been provided. Programs encourage diversity of participation to reflect the make up of the community - not just racial and ethnic or gender diversity.

##### Results

One quote from a participant in the health care field who received training in moderating public deliberation forums: "One thing I plan to do as a result of this session is look for a way to incorporate the public deliberation forums into our racial and ethnic health disparities work."

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

### Outcome #12

**1. Outcome Measures**

Sustained capacity for informed local decision making.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

As public issues become more complex and impact a greater number of citizens, people need new ways to dialogue and engage in public discourse that builds the capacity of community members to work through public issues.

Through public deliberation, people are provided new knowledge and skills to identify and frame public issues and to convene and facilitate local deliberative processes. The ability of the community to discuss difficult issues allows more voices to be heard and allows communities to work through issues.

**What has been done**

19 public issues forums were held around the state. Surveys have been conducted to get feedback and ideas from citizens. In one case, a study of access conditions at the Courthouse was conducted. Technical assistance has been provided to local boards about participation techniques. Group facilitation services have been provided.

**Results**

No data collected.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

**Outcome #13****1. Outcome Measures**

Group or organizational sustainability.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Increased capacity of local officials can result in a more effectively managed community with the ability to deal with issues as they arise. It is also likely to result in a more harmonious community. Increased capacity means that officials have the ability to learn and then to apply and update that learning in new situations.

**What has been done**

We provided research about CAFOs to 5 counties in Northwest Missouri. We provided technical and facilitation assistance for comprehensive planning and planning for housing. We developed poll worker training materials, and partnered in training delivery.

**Results**

Northwest Missouri officials report they have a better understanding of state statutes about CAFOs, and this will affect their decision process in the future.

Two communities and 2 regional organizations have demonstrated increased capacity to deal with future issues.

Herculaneum citizens can now work together and could not before.

NE Missouri has several new housing projects in small towns.

Clarksville is building on its previous successes to increase housing.

1200 poll workers were trained and demonstrated capacity to deal with issues that arise at the polls.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
608	Community Resource Planning and Development
610	Domestic Policy Analysis

**Outcome #14****1. Outcome Measures**

Development or update of plan.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	6

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Local officials wish to implement what citizens want. Organizations want to improve services to clientele. Citizens want input into the community or an organization of which they are a member or clientele. Funding organizations require a proposal to show relation to a plan. For implementation a plan shows the needed sequence in order for there to be a successful outcome. Plans are important as guides for future activity.

**What has been done**

We provided technical assistance for planning, including facilitation, and survey design. Participatory community and organizational planning have been provided in a number of communities.

**Results**

Hartsburg chose not to update its plan.

Henry County community survey was the first step in updating its plan. Canton area updated its plan. Herculaneum completed a comprehensive plan. A housing plan developed and implemented in Marion County. Hannibal did planning to apply for the state's DREAM Community program.

Battlefield is updating its plan beginning with a survey.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

**Outcome #15****1. Outcome Measures**

Increased partnerships and resources.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	15

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Communities wish to be able to improve what they offer their citizens. Organizations want to increase their outreach to clientele. Partnerships offer additional knowledge and personnel to achieve ends and expand networks. Resources are needed to implement plans and these can come from within the community or from outside.

**What has been done**

We assisted and in some cases conducted the Missouri Community Betterment Assessment. Vision to Action: Take Charge Too was used to facilitate planning (and training provided on how to use this), and programs on downtown revitalization and how to write grants were conducted. Assistance and training was provided in local data gathering.

**Results**

New resources included in-kind, increased fees and over \$3 million in grants. Communities formed partnerships with public and private organizations. Communities in Northeast Missouri have obtained new resources from grants, landfill tipping fees, land swaps and donations, equipment donations, etc. and joined a regional community foundation. 8 Northeast Missouri health departments received \$1.3 million in grants. 5 communities secured approximately \$215,000 in grants for a recycling center, abused and neglected children, school sidewalk safety, and parks and equipment. Canton area has 16 projects with grants of \$1.5 million since updating its plan, and formed partnerships with the Federal Reserve, a local college, and a local prison. One community partnered with private organizations for town events. Marion County communities worked with private developers to increase housing in several small towns. In another case a regional community foundation formed.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services

**Outcome #16****1. Outcome Measures**

Evidence of community goal attainment.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	2

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Citizens and local officials want their communities to be able to achieve their goals.

**What has been done**

Information, training, community facilitation, planning assistance (including Vision to Action: Take Charge Too) and grant writing assistance was provided.

**Results**

After receiving information and public discussion, Ivy Bend area citizens decided not to incorporate as that would raise their taxes. In the city of Palmyra recycling has increased 10%.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

**Outcome #17****1. Outcome Measures**

% of citizens reporting increased volunteering/engagement in local government, civic organizations, schools, and informal arrangements (including citizens seek public office).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Volunteers are an important part of any community and of many organizations. Without volunteers public services would be more expensive or would not be available at the same level.

**What has been done**

Technical assistance on comprehensive plan, community surveys, facilitating meetings.

**Results**

2 communities have taken actions resulting in increased engagement of citizens.

Herculaneum citizens can speak views without rancor. Community has learned to work together in the face of severe obstacles when it was in danger of becoming a ghost town.

Mayor of Palmyra instituted a youth board.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

Community decision making outcomes were limited by several external factors. Appropriations changes reduced field faculty and thus the number of communities worked with and the time available to build local partnerships and reach diverse stakeholder groups; ability to assist communities with identifying public issues and framing them for public deliberation. This also meant reduction in capacity to educate communities about the public deliberation process and train community members to moderate the forums resulting in communities not having experience with the process or choosing to budget for other programs. Competing programmatic challenges have increased as there are fewer people and those who remain take on additional work. Population changes impacted public forums because new immigrants may not have language skills or may feel intimidated by established local populations and therefore unwilling to speak publicly about their concerns. Competing public priorities force citizens to prioritize which public issues they will engage. Citizens discouraged by usual methods of public engagement on difficult issues, which result in polarizing on issues and some public discussion breaking down into shouting matches, are reluctant to engage in another process.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

**Evaluation Results**

After the general election in fall of 2006, evaluations distributed to a sample of poll workers in all counties regarding the effectiveness of the new modules for poll worker training developed for use by county elections officials in the election received the following ratings (scale of 1 to 4—highest). Providing information about the Help America Vote Act (HAVA) received a mean rating of 3.22; explaining accessible voting machines, 3.51; and dealing with difficult voters, 3.48.

The Kettering Foundation funded a recent evaluation survey conducted by Sandy Hodge and Susan Tharp to determine the impact of convener/moderator training since the program's inception in 1998. One of the impacts reported was the development of networks as a result of convening community forums around specific issues. Many respondents wrote about non-formal networks being developed. These non-formal networks connected co-workers, connected organizations, and connected communities. Those that wrote about being more connected with their co-workers appreciated knowing who had similar training. Others wrote about non-formal networks being formed with other organizations, indicating that when organizations work with the same clientele, the training laid the framework so that future programming could be developed as a joint effort. One example given was related to assisting new immigrants. People in communities gained new connections. After a forum around the issue of death and dying, doctors and nursing homes developed a new connection. Other issues have prompted the formation of study circles.

Quotes from participants who received training in moderating forums:

"Immediately following both days of the workshops, we found ourselves discussing forums we would like to put on ourselves, and eventually, teaching our corps on how to facilitate and moderate productive forums."

"I'll retool how I conduct discussions and/or deliberations. The possibilities are endless."

"One thing I plan to do as a result of this session is to share what I learned with others, and set up a forum for local issues. Maybe even talk the Greene County Commission into having you do a series of forums on up-coming issues. It was a good training session."

In Willard, the city administrator sees a possible use for deliberation this spring. "I'm going to suggest that the city council's work sessions be restructured to more closely resemble a forum than the traditional work session."

From a participant in the healthcare field: "One thing I plan to do as a result of this session is look for a way to incorporate the public deliberation forums into our racial and ethnic health disparities work."

Six MU faculty are using deliberative dialogue methods in their college classrooms as a result of training conducted as part of Ford Foundation funding. The results of the 11 forums held in Missouri are included in the Southern Growth Policies Board's Report on the Future of the South--Workforce Development.

### Key Items of Evaluation

Evaluation protocols and measures are being developed for decision support programming and for community planning programs. Similarly, evaluation of longer-term impact of public deliberation is under development as well.

**Program #28****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Ensuring Safe Communities

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
805	Community Institutions, Health, and Social Services	95%			
806	Youth Development	5%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	2.0	0.0	0.0	0.0
<b>Actual</b>	1.9	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
0	0	0	0
<b>1862 Matching</b>	<b>1890 Matching</b>	<b>1862 Matching</b>	<b>1890 Matching</b>
128930	0	0	0
<b>1862 All Other</b>	<b>1890 All Other</b>	<b>1862 All Other</b>	<b>1890 All Other</b>
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Establish COAD (Community Organizations Active in Disasters). Provide disaster educational materials & presentations to communities and organizations. Build partnerships with local, state, federal agencies and organizations. Consult with local emergency planning committees and/or citizen councils. Represent Extension at meetings of federal, state and local emergency management organizations after disasters. Assist local entities in identification of funding sources for community emergency management and homeland security, eg., USDA-RD, fire grants, etc. Provide disaster preparedness and mitigation leadership for Extension itself. Coordinate and participate in Extension disaster activities.

**2. Brief description of the target audience**

Targeted audience is all social groups in the community, including low-income and minority, Spanish-speaking, community organizations, local government, home builders, agencies that assist in disaster, businesses and farmers. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc.



**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	8000	20000	500	1000
2007	5662	2371	42	365

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Number of communities assisted with training and facilitation for disaster preparedness.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	45	50

**Output #2****Output Measure**

- Number of partners.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	100	146

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Citizens learn about hazards & risks in Missouri.
2	Communities, local businesses and citizens learn preparedness and mitigation strategies to reduce impacts of disasters.
3	Builders learn about incorporating safe rooms into home construction.
4	Communities & schools learn about school disaster mitigation, preparedness and exercises.
5	Communities adopt disaster mitigation plans and principles.
6	Community Organizations Active in Disaster (COADs) created and function to meet citizen needs.
7	Community and businesses improve hazard mitigation programs and disaster plans.
8	Practices adopted such as disaster plans and kits developed and safe rooms incorporated into building practices.
9	Communities, businesses, schools and homes are supportive of local emergency management.
10	Communities, businesses, schools and homes become more disaster resilient.
11	Communities, businesses, schools and citizens are more prepared for disasters.
12	Communities, businesses, schools and citizens recover quickly and with less cost.
13	Adoption of practices and plans, creation of COADs, effectiveness of COADs in disaster.

**Outcome #1****1. Outcome Measures**

Citizens learn about hazards & risks in Missouri.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missourians must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters.

**What has been done**

Information media materials for TV, web, and radio were developed and distributed. Faculty conducted 44 preparedness workshops and distributed hazard awareness and disaster preparedness information to a vast and diverse audience. Campus disaster awareness has been promoted. We have participated in local and state preparedness exercises across the state.

**Results**

No data collected but requests for programming and the use of the mobile safe room exhibit are increasing.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #2****1. Outcome Measures**

Communities, local businesses and citizens learn preparedness and mitigation strategies to reduce impacts of disasters.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missourians must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters.

**What has been done**

Information media materials for TV, web, and radio were developed and distributed. Faculty conducted 44 preparedness workshops and distributed hazard awareness and disaster preparedness information to a vast and diverse audience. Campus disaster awareness has been promoted. We have participated in local and state preparedness exercises across the state.

**Results**

No data collected but requests for programming and the use of the mobile safe room exhibit are increasing.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #3****1. Outcome Measures**

Builders learn about incorporating safe rooms into home construction.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Research has shown that safe rooms and/or the knowledge of "safe places" to shelter can have dramatic results in protecting citizens during severe weather events that strike their communities or homes.

**What has been done**

We maintain and use the mobile FEMA safe room display with information about construction, pamphlets and brochures about severe weather and a CD with safe room plans and other materials about severe weather and disaster preparedness. The display traveled to fairs and other events. A TV piece was developed and aired through numerous Missouri TV stations reaching hundreds of thousands of homes. The story was based on a builder who was incorporating a safe room into his new construction.

**Results**

The CEMP received over a dozen requests for safe room plans from prefabricated safe room vendors.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #4****1. Outcome Measures**

Communities & schools learn about school disaster mitigation, preparedness and exercises.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri communities and schools must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters.

**What has been done**

Information media materials for TV, web, and radio were developed and distributed. Faculty conducted 44 preparedness workshops and distributed hazard awareness and disaster preparedness information to a vast and diverse audience. Campus disaster awareness has been promoted. We have participated in local and state preparedness exercises across the state. Campus disaster awareness has been promoted. 4-Hers used GIS technology to support local emergency planning.

**Results**

Preschool operators that have been through training are developing plans. No other data available

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
806	Youth Development

**Outcome #5****1. Outcome Measures**

Communities adopt disaster mitigation plans and principles.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri communities, businesses, government agencies, and organizations must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters. Research has shown that preparedness and planning can have dramatic results in protecting citizens during severe weather events that strike their communities or homes.

**What has been done**

COADs have been formed to assist in preparedness. Community Emergency Response Team training has been conducted. Workshops have been conducted. TV and radio along with exhibits and displays have been used extensively. Emergency management has become part of leadership concerns.

**Results**

We have been invited by more communities to make presentations and assist in recovery. As a result of programming, 15 outdoor warning sirens have been installed in rural communities in Northwest Missouri.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #6****1. Outcome Measures**

Community Organizations Active in Disaster (COADs) created and function to meet citizen needs.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	5	8

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Disasters are unpredictable and external assistance does not meet all needs that arise. COADs include any agency that has a role to play in any phase of emergency management. COADs provide the platform for launching unmet needs groups in their communities in the event of a disaster event. In addition, established COADs function to assist in mitigation, preparedness, response and recovery - contributing to community resiliency to disaster.

**What has been done**

COADS were formed utilizing the state and local networks provided by MU Extension. These COADs formed after a disaster event but Extension is working on establishing and nurturing the COAD framework in many counties before a disaster event. We facilitated the meetings and provided organizational development assistance and disaster recovery and planning training and information.

**Results**

The Northeast Missouri (NEMO) Unmet Needs Committee secured a total of \$68,000 in funding and leveraged additional funds through government programs for recovery work. To date \$36,000 has been spent on recovery efforts and preparedness education. Additionally the committee has taken on the role of helping citizens and officials to become more prepared for future disasters through planning and individual and community preparedness.

Another Northeast Missouri COAD leveraged the funding from local sources and a USDA grant for installation of a tornados siren.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #7****1. Outcome Measures**

Community and businesses improve hazard mitigation programs and disaster plans.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri communities, businesses, government agencies, and organizations must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters. Research has shown that preparedness and planning can have dramatic results in protecting citizens during severe weather events that strike their communities or homes.

**What has been done**

COADs have been formed to assist in preparedness. Community Emergency Response Team training has been conducted. Workshops have been conducted. TV and radio along with exhibits and displays have been used extensively.

**Results**

We have been invited by more communities to make presentations and assist in recovery. As a result of programming, 15 outdoor warning sirens have been installed in rural communities in Northwest Missouri.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #8****1. Outcome Measures**

Practices adopted such as disaster plans and kits developed and safe rooms incorporated into building practices.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri communities, families, government agencies, organizations, and businesses must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters. Research has shown that safe rooms and/or the knowledge of "safe places" to shelter can have dramatic results in protecting citizens during severe weather events that strike their communities or homes.

**What has been done**

We maintained and used the mobile FEMA safe room display with information about construction, pamphlets and brochures about severe weather and a CD with safe room plans and other materials about severe weather and disaster preparedness. The display traveled to fairs and other events. A TV piece was developed and aired through numerous Missouri TV stations reaching hundreds of thousands of homes. The story was based on a builder who was incorporating a safe room into his new construction.

**Results**

The CEMP program received over a dozen requests for safe room plans from prefabricated safe room vendors. County extension offices have developed plans and have been equipped with disaster kits, NOAA Weather Radios and office disaster plans and checklists. Survey data shows that Missouri Extension faculty involved in the CEMP have developed family and office plans and kits.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development
805	Community Institutions, Health, and Social Services

**Outcome #9****1. Outcome Measures**

Communities, businesses, schools and homes are supportive of local emergency management.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri communities and businesses must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters. The key to addressing current and potential disasters is to integrate multidisciplinary research and education into a coordinated response that includes collaboration with local, state and federal partners.

**What has been done**

We distributed information to communities and citizens as well as provided hazard awareness and disaster preparedness information to a vast and diverse audience.

We partnered with SEMA to assist in meeting preparedness needs of citizens through local partnerships, facilitation of meetings. Workshops and training for preparedness and citizen emergency response have been conducted. We have strengthened the university's preparedness for disaster.

**Results**

No data collected. We have, however, been invited by more communities to make presentations and assist in recovery.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services



**Outcome #10****1. Outcome Measures**

Communities, businesses, schools and homes become more disaster resilient.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri communities and businesses must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters. The key to addressing current and potential disasters is to integrate multidisciplinary research and education into a coordinated response that includes collaboration with local, state and federal partners.

**What has been done**

We distributed information to communities and citizens as well as provided hazard awareness and disaster preparedness information to a vast and diverse audience.

We partnered with SEMA to assist in meeting preparedness needs of citizens through local partnerships, facilitation of meetings. Workshops and training for preparedness and citizen emergency response have been conducted. We have strengthened the university's preparedness for disaster.

**Results**

As a result of partnering with state agencies and a host of organizations for the past 20+ years, observations of community response and recovery to the 2007 spring flooding of the Missouri River in Northwest Missouri by comparison to 1993 and 1995 indicated that persons and businesses heeded warnings seriously and evacuated. This saved lives and time and funds of emergency responders. Community shelters were quickly set up and offered assistance to those displaced.

As multiple weather disasters have struck Missouri, communities in general are responding more routinely with establishment of shelters and services. The State Emergency Management Agency regularly taps MU Extension to assist in training and organization and coordination of local organizations.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #11****1. Outcome Measures**

Communities, businesses, schools and citizens are more prepared for disasters.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri communities and businesses must be prepared for the possibility of a multitude of weather events in addition to terrorist or seismic disasters. The key to addressing current and potential disasters is to integrate multidisciplinary research and education into a coordinated response that includes collaboration with local, state and federal partners.

**What has been done**

We distributed information to communities and citizens as well as provided hazard awareness and disaster preparedness information to a vast and diverse audience.

We partnered with SEMA to assist in meeting preparedness needs of citizens through local partnerships, facilitation of meetings. Workshops and training for preparedness and citizen emergency response have been conducted. We have strengthened the university's preparedness for disaster.

**Results**

As a result of programming, 15 outdoor warning sirens have been installed in rural communities in Northwest Missouri.

As a result of a functional exercise for the University of Missouri – Columbia campus for the scenario of an active sniper loose on campus, the campus has a new emergency notification system in place for all faculty, students and staff.

Preschools and day cares are receiving disaster planning courses and developing plans and kits for themselves.

County extension offices have been equipped with disaster kits, NOAA Weather Radios and office disaster plans and checklists.

The Community Development Society awarded the 2007 Outstanding Program to the Community Emergency Management Program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #12****1. Outcome Measures**

Communities, businesses, schools and citizens recover quickly and with less cost.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri has been and will likely continue to experience a number of disasters. Each is costly in dollars and can cost lives. Disaster preparedness can help mitigate cost and hasten recovery.

**What has been done**

We distributed information to communities and citizens as well as provided hazard awareness and disaster preparedness information and workshops to a vast and diverse audience. We partnered with SEMA to assist in meeting preparedness needs of citizens through local partnerships, facilitation of meetings. Workshops and training for preparedness and citizen emergency response have been conducted. We have strengthened the university's preparedness for disaster.

**Results**

As a result of partnering with state agencies and a host of organizations for the past 20+ years, observations of community response and recovery to the 2007 spring flooding of the Missouri River in Northwest Missouri by comparison to 1993 and 1995 indicated that persons and businesses heeded warnings seriously and evacuated. This saved lives and time and funds of emergency responders. Community shelters were quickly set up and offered assistance to those displaced.

As multiple weather disasters have struck Missouri, communities in general are responding more routinely with establishment of shelters and services. The State Emergency Management Agency regularly taps MU Extension to assist in training and organization and coordination of local organizations.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

**Outcome #13****1. Outcome Measures**

Adoption of practices and plans, creation of COADs, effectiveness of COADs in disaster.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Disasters are unpredictable and external assistance does not meet all needs that arise. COADs include any agency that has a role to play in any phase of emergency management. COADs provide the platform for launching unmet needs groups in their communities in the event of a disaster event. In addition, established COADs function to assist in mitigation, preparedness, response and recovery - contributing to community resiliency to disaster.

#### **What has been done**

COADS were formed utilizing the state and local networks provided by MU Extension. These COADs may be formed after a disaster event but Extension is working on establishing and nurturing the COAD framework in many counties before a disaster event. We facilitated the meetings and provided organizational development assistance and disaster recovery and planning training and information.

#### **Results**

County extension offices' emergency preparedness plans have been adopted and used in all regions of the state.

The NEMO Unmet Needs Committee secured a total of \$68,000 in funding and leveraged additional funds through government programs for recovery work. To date \$36,000 has been spent on recovery efforts and preparedness education. Additionally the committee has taken on the role of helping citizens and officials to become more prepared for future disasters through planning and individual and community preparedness.

Another Northeast Missouri COAD leveraged the funding from local sources and a USDA grant for installation of a tornadoes siren.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
805	Community Institutions, Health, and Social Services

#### **V(H). Planned Program (External Factors)**

##### **External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

##### **Brief Explanation**

Natural disasters and other emergency situations are unpredictable. Severe hail, windstorms, tornadoes, ice, snow storms, flooding and drought resulted in multiple presidential disaster declarations and one emergency declaration for the state of Missouri, on which MU Extension assisted during FY07:

July 2006: Hail/windstorms, 8 countiesOctober 2006: Drought, 105 countiesNovember 2006: Severe Storms, 9 countiesDecember 2006: Major snowstorm, statewideJanuary 2007: Ice storms, from southwestern counties through St. Louis metro area.May 2007: Severe storms and flooding, Northwest Missouri

#### **V(I). Planned Program (Evaluation Studies and Data Collection)**

##### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

**Evaluation Results**

In the spring of 2007 faculty worked with a group of education doctoral students on an internal evaluative inquiry to determine the extent to which the CEMP has prepared faculty, employees and county offices for emergencies and disasters. The study was intended also to determine if any discernable individual and institutional behavior changes related to emergency management/preparedness could be attributed to the CEMP. There were four evaluative questions guiding the evaluation: (1) Has the CEMP made the University of Missouri Extension (faculty/employees/offices) more prepared for disaster? (2) Has the institution/organization aided in the process? (3) How has this effort affected/influenced programming at the individual level? (4) Has this effort affected individual team members on a personal level (family, home, etc.)?

Several themes emerged and though there were varying degrees of opinions, most respondents agreed on major questions. The themes included communication, training, involvement, preparation, and support. In all areas those surveyed indicated there were significant increases in every area. Most importantly was the regional offices were better prepared for potential disasters, they and their families were significantly more prepared and the programming had created numerous opportunities to become more involved with multiple organizations at the local level. In summary, the CEMP is making a significant preparedness impact on those participating in the program and is meeting its goal of developing and delivering preparedness materials throughout the state.

**Key Items of Evaluation**

The purpose of the evaluation was to determine the efficacy of the program for a key audience, Extension itself. If the program cannot affect knowledge and behavior change internally and make itself more prepared for disaster then the program has little value outside of Extension amongst organizations, groups and citizens. This evaluation indicated clearly that CEMP has had a direct and measurable impact on extension faculty and staff.

Two more evaluations are planned to determine the scope and reach of the programming. One will look for changes among MU Extension employees not associated with the CEMP. The second will ask community organizations and citizens if and how programming has impacted their level of disaster preparedness or resiliency.

**Program #29****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Community Leadership Development for Youth and Adults

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
803 806	Sociological and Technological Change Affecting Individuals, Youth Development	50% 50%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.0	0.0	0.0	0.0
<b>Actual</b>	3.5	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
0	0	0	0
<b>1862 Matching</b>	<b>1890 Matching</b>	<b>1862 Matching</b>	<b>1890 Matching</b>
237503	0	0	0
<b>1862 All Other</b>	<b>1890 All Other</b>	<b>1862 All Other</b>	<b>1890 All Other</b>
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Form planning committee; assist with organizational development, fund development, and tailoring content to local community need. Provide facilitation, training, workshops, retreat, field trips and exchanges with other communities, conduct planning with education class for use of learning.

**2. Brief description of the target audience**

Targeted audience is all social groups in the community, including low-income and minority, youth (age 14-18), adults. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc. Also targeted among adults will be those who are currently serving in a leadership role in an agency, organization, neighborhood, club, community, business or aspire to serve.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	200	5000	150	2000
2007	12211	1045	498	5

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Number of program participants (gender and ethnicity).

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	200	354

**Output #2****Output Measure**

- Number of programs held.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	20	37

**Output #3****Output Measure**

- Number of volunteers who assisted.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	200	128

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increased knowledge, understanding, and skills.
2	Increased density of leadership networks.
3	Increased engagement in leadership activities.
4	Increase in collective community action undertaken.
5	Sustained capacity for community leadership development: the number of programs which continue after at least 5 years.
6	% of participants reporting changes in changes in personal growth and self-efficacy; community commitment; shared future and purpose, community knowledge and civic engagement.



**Outcome #1****1. Outcome Measures**

Increased knowledge, understanding, and skills.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Community leaders are the central force in effectively mobilizing people to address local issues. Frequently, community leaders wonder how to achieve the kind of success they dream about and recognize they cannot be successful alone or without greater personal capabilities. Effective citizen leaders translate knowledge and commitment into hands-on action to engage in building community networks, make well-informed community decisions and find real solutions to real problems.

**What has been done**

Programs engaged local leaders and citizens in developing a program adapted to the community. Past participants helped plan and deliver the cohort programs. Several have formed nonprofit organizations to support their programs. Three Leadership RAP programs were offered in a Juvenile Justice Center.

**Results**

After four years, 48.1% fewer Leadership RAP participants in the Juvenile Justice Center in Central Missouri had been referred to law enforcement compared to an equal number of non-participant residents from the same year. 80% or higher of the 2007 participants reported they were better able to resolve conflicts as a result. 93.3% or higher reported learning was important to getting what they want in life.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

Increased density of leadership networks.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Community leaders are the central force in effectively mobilizing people to address local issues. Frequently, community leaders wonder how to achieve the kind of success they dream about and recognize they cannot be successful alone or without greater personal capabilities. Effective citizen leaders translate knowledge and commitment into hands-on action to engage in building community networks, make well-informed community decisions and find real solutions to real problems.

**What has been done**

Programs engaged local leaders and citizens in developing a program adapted to the community. Past participants helped plan and deliver the cohort programs. Several have formed nonprofit organizations to support their programs. Three Leadership RAP programs were offered in a Juvenile Justice Center.

**Results**

No data collected.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

**Outcome #3****1. Outcome Measures**

Increased engagement in leadership activities.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Community leaders are the central force in effectively mobilizing people to address local issues. Frequently, community leaders wonder how to achieve the kind of success they dream about and recognize they cannot be successful alone or without greater personal capabilities. Effective citizen leaders translate knowledge and commitment into hands-on action to engage in building community networks, make well-informed community decisions and find real solutions to real problems.

**What has been done**

Programs engaged local leaders and citizens in developing a program adapted to the community. Past participants helped plan and deliver the cohort programs. Several have formed nonprofit organizations to support their programs. Three Leadership RAP programs were offered in a Juvenile Justice Center.

**Results**

In a one-year follow up survey, 54% of responding adult EXCEL (Experience in Community Enterprise and Leadership) participants scored greater than the mean on the civic engagement index.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #4****1. Outcome Measures**

Increase in collective community action undertaken.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Community leaders are the central force in effectively mobilizing people to address local issues. Frequently, community leaders wonder how to achieve the kind of success they dream about and recognize they cannot be successful alone or without greater personal capabilities. Effective citizen leaders translate knowledge and commitment into hands-on action to engage in building community networks, make well-informed community decisions and find real solutions to real problems.

**What has been done**

Programs engaged local leaders and citizens in developing a program adapted to the community. Past participants helped plan and deliver the cohort programs. Several have formed nonprofit organizations to support their programs. Three Leadership RAP programs were offered in a Juvenile Justice Center.

**Results**

In a one-year follow up survey, 54% of responding adult EXCEL participants scored greater than the mean on the civic engagement index.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #5****1. Outcome Measures**

Sustained capacity for community leadership development: the number of programs which continue after at least 5 years.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	15	19

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Community leaders are the central force in effectively mobilizing people to address local issues. Frequently, community leaders wonder how to achieve the kind of success they dream about and recognize they cannot be successful alone or without greater personal capabilities. Effective citizen leaders translate knowledge and commitment into hands-on action to engage in building community networks, make well-informed community decisions and find real solutions to real problems.

#### **What has been done**

Programs engaged local leaders and citizens in developing a program adapted to the community. Past participants helped plan and deliver the cohort programs. Several have formed nonprofit organizations to support their programs. Three Leadership RAP programs were offered in a Juvenile Justice Center.

#### **Results**

19 programs have been active for 5 years or more. One-third of Missouri's counties and communities - over 7,190 people - have participated in locally driven CLD programs over the past 23 years. 37 programs were held with 1,959 participants and 128 volunteers. Programs included in this count were Step Up to Leadership, Leadership RAP, Neighborhood Leadership Academy and Adult & Youth EXCEL programs. Randolph County EXCEL completed its 10th program for a total of 236 graduates.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities

#### **Outcome #6**

##### **1. Outcome Measures**

% of participants reporting changes in changes in personal growth and self-efficacy; community commitment; shared future and purpose, community knowledge and civic engagement.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Condition Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	70	64

##### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Community leaders are the central force in effectively mobilizing people to address local issues. Frequently, community leaders wonder how to achieve the kind of success they dream about and recognize they cannot be successful alone or without greater personal capabilities. Effective citizen leaders translate knowledge and commitment into hands-on action to engage in building community networks, make well-informed community decisions and find real solutions to real problems.

#### **What has been done**

Programs engaged local leaders and citizens in developing a program adapted to the community. Past participants helped plan and deliver the cohort programs. Several have formed nonprofit organizations to support their programs. Three Leadership RAP programs were offered in a Juvenile Justice Center.

#### **Results**

Outcomes included: personal growth and self-efficacy community commitment; a shared future and purpose for the community; community knowledge; civic engagement among participants; increased knowledge of local, county and state resources, local history and decision making process, local issues that affect the community processes for getting things done in the community, and other factors related to the roles and responsibilities of community leaders; and changes in attitudes about the factors important in relationships between leaders and followers as well as individuals' assessments of their leadership capacity.

Percent of participants scoring greater than the mean on the following indices in follow up survey: 49% personal growth and self-efficacy, 53% community commitment, 53% shared future and purpose for the community, 63% community knowledge, and 54% civic engagement.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

### V(H). Planned Program (External Factors)

#### External factors which affected outcomes

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

#### Brief Explanation

A number of concerns facing communities demand leadership related to community development. The contemporary arena in which community actions are pursued can seem overwhelmingly complex. For example, community organizations and political subdivisions such as cities, school districts, library boards and counties continually struggle to find qualified residents to serve as council, board and commission members.

The forces external to the community locality and structure that affect its status and its future are important to take into account in the process of formulating leadership programs. These forces include: the devolution of authority for action and service delivery to the community; the double bind created by trying to maintain quality with fewer resources; expectations for sharing power and responsibility; interdependence, diversity, collaboration, and communication; and displacement of the developmental paradigm with the globalization paradigm.

Less than the target of 70% was reached in followup EXCEL evaluation of 5 key areas because the data is from the benchmark study. Plans are to use these scores as the starting point for comparison of scores over time. CLD programs have participated in evaluation efforts on a voluntary basis producing a small number of cases in the benchmark data. In 2008, programs will be required to participate in an evaluation survey designed by Dr. Ken Pigg that is being used in a multi-state NRI funded project. An evaluation process is being centralized in the State CD Extension office for use with Regional staff. Administration will take place approximately 6 mos. to 1 yr. following the end of the educational program.

### V(I). Planned Program (Evaluation Studies and Data Collection)

#### 1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants

## Evaluation Results

Outcomes from EXCEL program: personal growth and self-efficacy community commitment, a shared future and purpose for the community, community knowledge, and civic engagement among participants. Increased knowledge of local, county and state resources, local history and decision making process, local issues that affect the community, processes for getting things done in the community, and other factors related to the roles and responsibilities of community leaders, and changes in attitudes about the factors important in relationships between leaders and followers as well as individuals' assessments of their leadership capacity.

Percent of participants scoring greater than the mean on the following indices in follow up survey: 49% personal growth and self-efficacy, 53% community commitment, 53% shared future and purpose for the community, 63% community knowledge, and 54% civic engagement.

Plans are to use scores from benchmark data as the starting point for comparison of scores over time. In 2008, programs will be required to participate in an evaluation survey designed by Dr. Ken Pigg that is being used in a multi-state NRI funded project. An evaluation process is being centralized in the State CD Extension office for use with Regional staff. Administration will take place approximately 6 months to 1 year following the end of the educational program.

An evaluation plan has been designed by a team of state and regional faculty that includes: a demographic questionnaire at beginning of program, a post/pre test (survey); individual session assessments, anticipated actions and actions taken assessment (NCR Recommendations) and creation of a process for focus groups for long-range evaluation efforts.

## Key Items of Evaluation

Who participates; What is program implementation; What participants learn (skills and knowledge); What individual behaviors change; What impact individual participants have on their community; Did the program support the development of more/new/more capable leadership in communities?; Did the program, through the participant, improve the quality of life in their community? (projects implemented, resources connected); Are they using the training? Is it making a difference in their community?

Indicators to be measured and reported: Learning by participants; successful implementation of program; Increased diversity and inclusion in leadership structure; Diversity of participants; Minority participants taking on new leadership roles/opportunities; Leadership roles and opportunities undertaken; Planning/Projects implemented in community; Economic value/resources connected to community

An NRI research project is investigating the relationship between individual level outcomes of participation in community leadership education programs with community level outcomes which are intended as a result of the intervention. This PI (K. Pigg) has developed a valid and reliable instrument for measuring individual outcomes in five areas of community leadership and civic responsibility. This instrument is being used or has been used in assessing these outcomes in Missouri, Minnesota, Wyoming, Illinois, Oklahoma, Mississippi, Arkansas, and Louisiana. This researcher will use the results of these activities as part of the database to be developed in this project. In addition, the PIs will use the existing instrumentation and procedures to gather data on the 12 control communities to be selected in this research, administering the instrument to leaders identified using the reputational and positional methods in a snowball procedure. It is estimated the number of respondents in each of the ten communities will be 30-40. Based on prior experience, it is anticipated a 50% return rate will be achieved. In addition, the project proposes to operationalize seven forms of "community capital assets" for use as dependent variables and link these measures to the individual-level changes in leadership capacity. Existing literature will be searched to support the development of an instrument to be administered to key informants in communities (same respondents as complete the individual leadership capacity survey) to measure these capital assets. This effort will be bolstered by the use of secondary data or non-obtrusive data as necessary and appropriate. Analysis will involve straight forward multivariate techniques due to the size of the population and the number of variables involved. The results will inform the community leadership literature in important ways and will support efforts by institutions and organizations to identify the "return on investment" for leadership development education as well as provide a tested method for completing this documentation in specific community settings.

**Program #30****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Building Inclusive Communities

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
610	Domestic Policy Analysis	5%			
803	Sociological and Technological Change Affecting Individuals,	40%			
805	Community Institutions, Health, and Social Services	45%			
806	Youth Development	10%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	4.3	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
38040	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
251074	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Provide facilitation, training, workshops. Conduct intensive courses and conferences to share state of the art knowledge and research and to integrate research with community needs. Assist with organizational development, fund development, and tailoring content to local community need, and gaining non-profit status. Work with media and facilitate partnerships to assist in working to meet needs of Spanish-Speaking and other minority populations.

**2. Brief description of the target audience**

Targeted audience is all social groups in the community, including low-income and minority, youth and adults. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc. Also targeted are those who are currently serving in a leadership role in an agency, organization, neighborhood, club, community, business or aspire to serve; local and state government officials and professionals working in community development.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	3000	10000	300	1000
2007	15157	69136	705	13632

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	1	1

**V(F). State Defined Outputs****Output Target****Output #1****Output Measure**

- Number of partners engaged.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	40	194

**Output #2****Output Measure**

- Number of conferences, courses or workshops held.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	7	19



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Individuals have an understanding of the diverse relationships that exist within communities and organizations.
2	Increased utilization and development of networks that bridge between diverse cultural groups.
3	Individuals, organizations, and communities value and celebrate their cultural, ethnic, and racial diversity.
4	% of participants in the Community Development Academy that report changes in communities' capacities and collaboration as a result of their application of skills and knowledge after 3 years.
5	% participants will gain knowledge and skills in building inclusive communities.
6	% participants that indicate application of skills and knowledge gained after one year.
7	People understand and appreciate the cultural attributes of a diverse society.
8	More people from different cultural and racial groups participate in University programs.
9	Individuals develop skills in leadership, facilitation, group process, public deliberation planning and evaluation that make it possible to create, develop, and work with diverse groups.
10	Communities understand the opportunities presented by change.
11	Diverse elements of the community are engaged in civic affairs.
12	Educational resources are accessible and relevant to the needs of all members of the community.
13	Intercultural competence is demonstrated.
14	Individuals are engaged in activities that broaden their view of the world.
15	Public leaders reflect the diversity of the communities they serve.
16	Communities are integrated in that the public policies reflect the diverse interests of the people who live and work in areas affected.
17	Collaborative relationships among different interest groups are the norm for addressing complex community issues.
18	Communities have developed and use an inclusive planning and decision-making process that helps them effectively address societal changes.

**Outcome #1****1. Outcome Measures**

Individuals have an understanding of the diverse relationships that exist within communities and organizations.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Communities are undergoing tremendous change. Even small villages that have relied for generations on maintaining their traditions are faced with changes as demographic and economic restructuring takes place across Missouri. These changes place a premium on developing all the capacities that exist within the community. To do this people need to develop the capacity to work in diverse environments and engage a cross-section of the community in decision-making.

**What has been done**

The three-course Community Development Academy focused on developing understanding and skills to engage diverse groups in community action. Course 1 was conducted twice, and courses 2 and 3 each once. Work with nonprofit organizations included similar foci. Alianzas programs worked to build networks of service providers, share resources and increase their understanding of the issues facing new immigrants in those communities. Training programs, cultural festivals, and workshops were conducted.

**Results**

Sixty-three percent of survey respondents participating in the CDA between 2003 and 2006 increased their understanding of the diverse relationships that exist within communities; 47% increased interactions among diverse groups and reported nine projects related directly to building inclusive communities such as community action for youth and senior citizens and programs for recovering addicts and the families of those who are incarcerated.

Networks in southeast and central Missouri hosted cultural festivals that brought together diverse groups of people to celebrate culture, bridge differences, and enhance networking of community resources. One community's multicultural forum leveraged resources to provide additional services; sponsored a cultural festival; provided leadership to the development of a new health clinic, bus system, affordable housing initiatives; and increased public awareness of cultural differences.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

**Outcome #2****1. Outcome Measures**

Increased utilization and development of networks that bridge between diverse cultural groups.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Community service providers, nonprofits, civic groups, foundations, local governments, and others are being asked to do more with fewer resources. Few groups have access to all the resources they need to accomplish their goals on their own. Bridging networks can increase access to resources, expand a group's view of the world, increase understanding of different cultures and increase capacity to address complex communities issues by cultivating networks that bridge across cultural differences.

**What has been done**

Networks in west central, southwest, northwest Missouri have been formed to bring together service providers in these regions to share resources and increase their understanding of the issues facing new immigrants in those communities. Training programs, cultural festivals, and workshops have been conducted that enhance skills in cultural competency, ESOL, and working in collaborations to develop individual capacities that begin to bridge differences between cultures. Bi-National Health Week has been sponsored with the Mexican Consulate.

**Results**

Networks have fostered new projects, provided support to existing efforts, and leveraged resources from a variety of institutions to increase the scope of services available in communities. Networks in southeast and central Missouri hosted cultural festivals that brought together diverse groups of people to celebrate culture, bridge differences, and enhance networking of community resources. One community's multicultural forum leveraged resources to provide additional services; sponsored a cultural festival; provided leadership to the development of a new health clinic, bus system, affordable housing initiatives; and increased public awareness of cultural differences. A 60-organization network in west central Missouri provided leadership to Bi-national Health Week, which provides services to approximately 4000 Hispanic people. Ongoing health screening at the Mexican Consulate has continued throughout the year.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
805	Community Institutions, Health, and Social Services

**Outcome #3****1. Outcome Measures**

Individuals, organizations, and communities value and celebrate their cultural, ethnic, and racial diversity.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Community service providers, nonprofits, civic groups, foundations, local governments, and others are being asked to do more with fewer resources. Few groups have access to all the resources they need to accomplish their goals on their own. Bridging networks can increase access to resources, expand a group's view of the world, increase understanding of different cultures and increase capacity to address complex communities issues by cultivating networks that bridge across cultural differences.

**What has been done**

Networks in west central, southwest, and northwest Missouri have been formed to bring together service providers in these regions to share resources and increase their understanding of the issues facing new immigrants in those communities. Training programs, cultural festivals, and workshops have been conducted that enhance skills in cultural competency, ESOL, and working in collaborations to develop individual capacities that begin to bridge differences between cultures. Bi-National Health Week has been sponsored with the Mexican Consulate.

**Results**

Networks formed as part of the Alianzas program have fostered new projects, provided support to existing efforts, and leveraged resources from a variety of institutions to increase the scope of services available in communities. Networks in southeast and central Missouri hosted cultural festivals that brought together diverse groups of people to celebrate culture, bridge differences, and enhance networking of community resources. One community's multicultural forum leveraged resources to provide additional services; sponsored a cultural festival; provided leadership to the development of a new health clinic, bus system, affordable housing initiatives; and increased public awareness of cultural differences.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

**Outcome #4****1. Outcome Measures**

% of participants in the Community Development Academy that report changes in communities' capacities and collaboration as a result of their application of skills and knowledge after 3 years.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	60	48

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

It is critical for community organizations to be able to effectively collaborate with other organizations, governmental institutions and agencies, and businesses both internally and externally. Particularly, small, urban and rural community-based organizations must carefully choose the situations and organizations to work with because they literally cannot afford to make a mistake. Developing the capacity to participate in collaborations as well as when not to participate is essential.

**What has been done**

Delivery of the three-course Community Development Academy provided a strong emphasis on developing the capacity to work with others and participate in collaborative relationship. The Empowering Communities for the Future course focused on issues related to community sustainability, through formal sessions on working collaboratively and application of methods to develop skills. Course 1 was conducted twice, and courses 2 and 3 each once.

### Results

During 2007, in an online survey of CDA participants sent to 154 people who completed at least one of the three CDA courses between 2003 and 2006, 66 respondents (51% return rate) indicated their involvement in CDA led to changes in community development practices, increased resources, increased volunteerism and new projects.

For 47% of the participants the CDA translated into increased resources for their organization or community, with 16 estimating a combined value of \$955,250 in increased resources. Learning was used to mobilize 489 volunteers that provided over 9,000 hours, estimated to be of an additional value of \$145,080. Nearly half, 49%, of participants successfully initiated, mobilized, or coordinated a new community project. Nine projects were related to community viability, nine to building inclusive communities, six to community leadership, and four to community decision-making.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities
805	Community Institutions, Health, and Social Services

### Outcome #5

#### 1. Outcome Measures

% participants will gain knowledge and skills in building inclusive communities.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	63

#### 3c. Qualitative Outcome or Impact Statement

##### Issue (Who cares and Why)

Communities are undergoing tremendous change. Even small villages that have relied for generations on maintaining their traditions are faced with changes as demographic and economic restructuring takes place across Missouri. These changes place a premium on developing all the capacities that exist within the community. To do this people need to develop the capacity to work in diverse environments and engage a cross-section of the community in decision-making.

##### What has been done

Delivery of the three-course Community Development Academy focused on assuring that all voices are represented and presented methods to engage all in community action. The courses attracted a broad diversity of participants, including participants from around the country and the world. The diversity of the participants affects the learning and provided a diversity of contexts on building communities. Course 1 was conducted twice, and courses 2 and 3 each once.

### Results

During 2007, in an online survey of CDA participants sent to 154 people who completed at least one of the three CDA courses between 2003 and 2006, 66 respondents (51% return rate) indicated their involvement in CDA led to changes in community development practices, increased resources, increased volunteerism and new projects.

Sixty-three percent increased their understanding of the diverse relationships that exist within communities, and 47% increased interactions among diverse groups. Forty-nine percent of the participants successfully initiated, mobilized, or coordinated a new community project. Nine projects were related directly to building inclusive communities such as community action for youth and senior citizens and programs for recovering addicts and the families of those who are incarcerated.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities

### Outcome #6

#### 1. Outcome Measures

% participants that indicate application of skills and knowledge gained after one year.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

#### 3c. Qualitative Outcome or Impact Statement

##### Issue (Who cares and Why)

There is increasing pressure on educational programs to measure the impact they have in communities over time. Participants and those who support program development want to be sure their investment in the program will have an impact over time. They want dollars invested in education to translate into the capacity to manage change in their communities.

##### What has been done

The Community Development Academy is an applied learning program. The courses combine leading edge thinking with practical application to enhance the capacity of people to work effectively with a broad range of community issues. Each issue requires some form of decision-making process and implementation in the community arena beyond the individual, the family, or business firm. The program is designed to help people create their own change in their communities.

##### Results

One participant stated, "This course helped me to redefine my job. I have now incorporated more group facilitation, leadership and conflict resolution techniques in my work and have learned to apply them in appropriate situations."

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

### Outcome #7

**1. Outcome Measures**

People understand and appreciate the cultural attributes of a diverse society.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Communities are undergoing tremendous change. Even small villages that have relied for generations on maintaining their traditions are faced with changes as demographic and economic restructuring takes place across Missouri. These changes place a premium on developing all the capacities that exist within the community. To do this people need to develop the capacity to work in diverse environments and engage a cross-section of the community in decision-making.

**What has been done**

The three-course Community Development Academy focused on developing understanding and skills to engage diverse groups in community action. Course 1 was conducted twice, and courses 2 and 3 each once. Work with nonprofit organizations included similar foci. Alianzas programs worked to build networks of service providers, share resources and increase their understanding of the issues facing new immigrants in those communities. Training programs, cultural festivals, and workshops were conducted.

**Results**

No specific data collected.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #8****1. Outcome Measures**

More people from different cultural and racial groups participate in University programs.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri is a diverse state. Historically, the state is approximately 11% African American. The Latino population in Missouri currently stands at approximately 2.5% of the total state population but is increasing more rapidly than any other group, more than 130% since 1990 and has impacted rural areas. Of the 114 counties in Missouri, all but four saw an increase in this population. Most of the overall population increase in the past census was due to an increase in non-white populations.

#### **What has been done**

Programs supported organizations working with diverse populations to increase cultural competency and connect diverse groups of people resources. Alianzas worked with the rapidly growing Latino population. Cambio de Colores facilitated the sharing of current research findings on issues of community integration. The Community Development Academy prepared people to work in diverse settings and reentry programs facilitate the integration of prisoners back into their communities.

#### **Results**

Building Inclusive Communities has greatly increased Extension's contact with diverse groups. More than 1/3 of program participants were Hispanic (36.9%), Fifty-eight percent were women and 21.6% were black. The growth of the Alianzas program has extended the reach of Extension programs into diverse communities. The Community Development Academy has been credited with increasing participant understanding of the diverse relationships that exist within communities. Sixty-three percent report their understanding increased quite a bit or extensively.

The Bi-national Health Week is one of Alianzas' largest programs reaching more than 4,000 people during the week. Extension partners with 40 Latino agencies put on the program. A successful program greatly increases the chance there will be other opportunities for collaboration with some of these same agencies.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities
610	Domestic Policy Analysis
805	Community Institutions, Health, and Social Services

#### **Outcome #9**

##### **1. Outcome Measures**

Individuals develop skills in leadership, facilitation, group process, public deliberation planning and evaluation that make it possible to create, develop, and work with diverse groups.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

The pace of change is so fast it is increasingly difficult for community leaders and community serving organizations to manage issues as they arise. They need to be able to anticipate changes that will affect them in the future. In order for communities to deal effectively with change and make organizations sustainable they need the capacity to develop leaders, engage diverse segments of the community, develop effective plans, and evaluate the effectiveness of the work they do.

##### **What has been done**



Programs were conducted in communities around the state to help organizations develop their capacities to be more effective in their communities. We worked to strengthen community nonprofit organizations in planning, group process, collaboration, and board development. The Community Development Academy focused on developing individual skills in group process, planning, deliberation, leadership, and evaluation.

### Results

In northeast Missouri organizations have demonstrated increased leadership capacity through increased access to resources and the ability to effectively address local issues. Work with an organization in northwest Missouri led to a long-range plan, expansion of programming and increased resources. In east central Missouri strategic planning and board development have increased organizational effectiveness.

Seventy-five percent of participants in the Community Development Academy reported their knowledge of community development group process increased quite a bit or extensively; over 70% reported their knowledge of community development tools increased quite a bit or extensively; and over 62% credited the Community Development Academy with increasing their skills in using the community development process quite a bit or extensively.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services
803	Sociological and Technological Change Affecting Individuals, Families and Communities

### Outcome #10

#### 1. Outcome Measures

Communities understand the opportunities presented by change.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

#### 3c. Qualitative Outcome or Impact Statement

##### Issue (Who cares and Why)

Communities are undergoing tremendous change. Even small villages that have relied for generations on maintaining their traditions are faced with changes as demographic and economic restructuring takes place across Missouri. These changes place a premium on developing all the capacities that exist within the community. To do this people need to develop the capacity to work in diverse environments and engage a cross-section of the community in decision-making.

##### What has been done

Programs were conducted in communities around the state to help organizations develop their capacities to be more effective in their communities. We worked to strengthen community nonprofit organizations in planning, group process, collaboration, and board development. The Community Development Academy focused on developing individual skills in group process, planning, deliberation, leadership, and evaluation.

### Results

No data collected.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #11****1. Outcome Measures**

Diverse elements of the community are engaged in civic affairs.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri is a diverse state racially, ethnically, and politically. Most of the overall population increase in the past census was due to an increase in non-white populations. Communities are undergoing tremendous change and must rely on all the capacities that exist within the community. To do this people need to develop the capacity to work in diverse environments and engage a cross-section of the community in decision-making.

**What has been done**

Programs were conducted in communities around the state to help organizations develop their capacities to be more effective in their communities. We worked to strengthen community nonprofit organizations in planning, group process, collaboration, and board development. The Community Development Academy focused on developing individual skills in group process, planning, deliberation, leadership, and evaluation.

**Results**

No data collected.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #12****1. Outcome Measures**

Educational resources are accessible and relevant to the needs of all members of the community.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The increasing diversity of the population in Missouri makes it difficult to ensure educational resources are available to the populations that need them. The increase in the Latino community, particularly in rural areas with limited educational resources places a premium on developing materials that are culturally and linguistically appropriate.

#### **What has been done**

The Alianzas program has expanded Extension's capacity to work with immigrant populations in Missouri. Alianzas has translated materials into Spanish, developed training materials to teach Spanish to English-speaking resource people. The Bi-national Health Week connected health care resources to immigrant populations. Alianzas used a variety of communication and outreach strategies to reach this community.

#### **Results**

Alianzas has increased access to resources in a number of communities where it has concentrated efforts. For example, in St. Joseph, Missouri where the Latino community is new, training in Spanish was conducted for staff, diversity programs were conducted, emergency preparation materials were developed in Spanish, and a research project was conducted to better understand the health care needs of the newly emerging Hispanic community.

The number of collaborators and participants has increased each year the Bi-national Health Week has been held. This growth has enabled Extension to better understand the needs of this community, develop relevant materials and ensure they are able to get into the hands of people who can use them.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

#### **Outcome #13**

##### **1. Outcome Measures**

Intercultural competence is demonstrated.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Action Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

###### **Issue (Who cares and Why)**

Intercultural competence is important to the integration of communities around Missouri experiencing an influx of newcomers. The potential for conflict is high when the receiving community does not understand the newcomers. Programs in intercultural competence help bridge the differences between the newcomer and receiving communities and contribute to successful integration.

###### **What has been done**

Alianzas worked with 13 communities to implement programs in cultural competency, train staff in Extension to work with diverse groups, and build networks of community organizations to serve as bridges between newcomers and the receiving community. Cambio de Colores facilitated the sharing of current research findings on issues of community integration. The Community Development Academy prepared people to work in diverse settings.

###### **Results**

No data collected.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities
610	Domestic Policy Analysis

**Outcome #14****1. Outcome Measures**

Individuals are engaged in activities that broaden their view of the world.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Intercultural competence is important to the integration of communities around Missouri experiencing an influx of newcomers. The potential for conflict is high when the receiving community does not understand the newcomers. Programs in intercultural competence help bridge the differences between the newcomer and receiving communities and contribute to successful integration.

**What has been done**

Alianzas worked with 13 communities to implement programs in cultural competency, train staff in Extension to work with diverse groups, and build networks of community organizations to serve as bridges between newcomers and the receiving community. Cambio de Colores facilitated the sharing of current research findings on issues of community integration. The Community Development Academy prepared people to work in diverse settings.

**Results**

No data collected.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
610	Domestic Policy Analysis
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #15****1. Outcome Measures**

Public leaders reflect the diversity of the communities they serve.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri is a diverse state. Historically, the state is approximately 11% African American. The Latino population in Missouri currently stands at approximately 2.5% of the total state population but is increasing more rapidly than any other group, more than 130% since 1990 and has impacted rural areas. Of the 115 counties in Missouri, all but four saw an increase in this population. Most of the overall population increase in the past census was due to an increase in non-white populations.

**What has been done**

Alianzas worked with 13 communities to implement programs in cultural competency, train staff in Extension to work with diverse groups, and build networks of community organizations to serve as bridges between newcomers and the receiving community. Cambio de Colores facilitated the sharing of current research findings on issues of community integration. The Community Development Academy prepared people to work in diverse settings.

**Results**

No data collected.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
610	Domestic Policy Analysis
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #16****1. Outcome Measures**

Communities are integrated in that the public policies reflect the diverse interests of the people who live and work in areas affected.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri is a diverse state racially, ethnically, and politically. Most of the overall population increase in the past census was due to an increase in non-white populations. Communities are undergoing tremendous change and must rely on all the capacities that exist within the community. To do this people need to develop the capacity to work in diverse environments and engage a cross-section of the community in decision-making.

**What has been done**

Alianzas worked with 13 communities to implement programs in cultural competency, train staff in Extension to work with diverse groups, and build networks of community organizations to serve as bridges between newcomers and the receiving community. Cambio de Colores facilitated the sharing of current research findings on issues of community integration. The Community Development Academy prepared people to work in diverse settings.

#### Results

No data collected.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
610	Domestic Policy Analysis
803	Sociological and Technological Change Affecting Individuals, Families and Communities

#### Outcome #17

##### 1. Outcome Measures

Collaborative relationships among different interest groups are the norm for addressing complex community issues.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Community organizations rarely have all the resources they need to address any single issues. Issues themselves are often too complex for a single group to address even when they have resources. Effectively addressing complex issues often requires that groups (public, private, non-profit, and for profit) work together to understand the issues and develop effective strategies. New resources and services may result from these collaborative efforts.

###### What has been done

Extension worked with community-based organizations to help them develop their capacity to work with other organizations and groups. Workshops focused on building understanding of the concept of collaboration, and consultations helped community organizations practice the concepts and develop collaborative relationships.

#### Results

One small community of 20,000 people in central Missouri exemplified the use of collaboration to create new resources and address community issues. The community lacked transportation options for low-income people who needed to travel to the nearest full service hospital 70 miles away. The police donated a car, emergency management services handled dispatch, and Older Adults Transportation Service (OATS) donated a driver in order to develop a shuttle service. This success leveraged the implementation of a sustained local bus system, to which a second bus has been added. In addition, the community pulled together a variety of local partners to develop a local health care clinic that served the burgeoning Hispanic population.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

#### Outcome #18

**1. Outcome Measures**

Communities have developed and use an inclusive planning and decision-making process that helps them effectively address societal changes.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

It is increasingly difficult to anticipate the issues and changes that will be affecting the development communities and community organizations in the future. Planning helps groups analyze change as it is occurring and look into the future to see what may be coming that will affect their organization and community.

**What has been done**

Board development programs, strategic planning sessions, and visioning sessions were conducted with community organizations as a means of organizing to deal with change. Workshops and consultations were conducted with groups and organizations to develop individual capacities and increase the effectiveness of the groups. Programs focused on planning and visioning programs that engaged diverse elements of the community and/organization in the process.

**Results**

In St. Joseph, the Midland Empire Resources for Independent Living (MERIL) has now purchased its facility, and the board continues to develop a long-range plan for the organization, including beginning to provide in-home services in the region.

"Living Hope" is a thrift store that supports a food pantry for DeKalb County residents. As a result of facilitation by Extension, Living Hope was formed, obtained its nonprofit status to accept donations for the food pantry and purchase food from Second Harvest. A program has been started especially for seniors and collaborates with churches along with volunteers and community contributions, volunteers and others have made the effort a success. Proceeds from sales are able to support the rent and utilities.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

Several external factors affected the Building Inclusive Communities Program. The public discourse on issues of immigration has created a climate of anger and fear in a number of communities experiencing a large influx of Latino immigrants. The State of Missouri saw legislation introduced that would have affected Extension's ability to reach immigrant groups had it been passed. The federal government's inability to effectively address immigration reform has added to local tensions.

Programs designed to strengthen nonprofits tend to focus on small community-based organization that have fewer other options for educational resources. Changes to the rules governing charitable organizations may affect how community-based organizations operate. A statewide conference of nonprofits in Missouri was held in 2007 that may lead to the formation of a state association, potentially increasing the voice of nonprofits in public policy.

Population changes continue to affect these programs. Few organizational resources deal directly with immigrants moving into small communities. Organizations that emerge to serve as bridging institutions are often under-funded, have limited prospects for growing their resource base, and have to compete with other groups and organizations that have longer histories, more capacity, and an existing resource base to strengthen their position. The lack of bridging institutions in many communities is negatively affecting their ability to effectively integrate the new populations into the community.

A projected slowdown of economic growth in 2008 and a possible recession has placed additional demands on existing service providers while simultaneously reducing the money in the system for their work. This has increased workload of organizations, the demand for the programs that support the work of nonprofit organizations, and the premium placed on effective planning and board development. Economic changes have exacerbated community tensions between newcomer and receiving communities.

**V(l). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- During (during program)
- Case Study

**Evaluation Results**



The Community Development Academy was the only program that engaged a systemic programmatic evaluation in 2007. Strengthening Community Nonprofit Organizations and Alianzas are in the process of developing programmatic evaluation processes. Both programs developed frameworks for evaluating their program and are currently in the process of developing effective measures.

The Community Development Academy regularly collects post program evaluation at the close of the course. In 2007, an online evaluation was implemented to measure the extent to which participation in the CDA prepared participants to practice community development. In the spring of 2007 the survey was sent to 154 people who had completed at least 1 of the 3 CDA courses between 2003 and 2006. Sixty-six of the 154 responded. Of the 154 email accounts, 25 were returned as undeliverable leaving us with a response rate of 51%. Respondents were mostly women (70%), white (77%), and worked for the University (56.5%), or another academic institution (21%). Participant responses indicated their involvement in CDA led to changes in community development practices, increased resources, increased volunteerism and new projects. of Missouri Development Academy

**Community Development Practices**—Seventy-five percent of participants reported their knowledge of community development process increased quite a bit or extensively; 72% reported their understanding of CD principles increased quite a bit or extensively; 70% reported their knowledge of CD tools increased quite a bit or extensively; 63% increased their understanding of the diverse relationships that exist within communities and 47% increased their interaction with diverse groups.

**Increased Resources**—For 47% of the participants the value of the Community translated into increased resources for their organizations or communities. Some of the participants (16) estimated a dollar value of \$955,250 in increased resources. Development Academy

**Increased Volunteerism**—The use of learning in CDA has mobilized 489 volunteers serving more than 900 hours. New volunteers were attracted and seasoned volunteers were energized.

**New Projects**—Nearly half (49%) of the participants have successfully mobilized or coordinated a new project. Nine projects related to economic viability, nine projects related to building inclusive communities, six projects related to community leadership, and four projects related to community decision-making.

### Key Items of Evaluation

**Community Development Academy**—The Community Development Academy evaluation reported above was piloted for the first time in 2007. We plan to conduct the survey annually to assess how participation in the course translates into the increased capacity of the participants and leads to changes in communities. The challenge is that some participants will have completed 1 course and others all three. By the time each participant completes all three courses they could have seen the online survey three times. This could lead to survey fatigue and affect the quality of the data collected. Analysis of the results of the 2007 survey will result in revisions to the program. The instrument will be reviewed and revised based on analysis of the survey results and the needs of the program.

**Strengthening Nonprofit Community Organizations**—There is currently no systematic programmatic evaluation. Evaluations of workshops will focus on the learning from that event. Much of the work in this program area is ongoing and in consultation with nonprofits over time. A framework for programmatic evaluation is being designed to focus on eight core areas of work: collaboration, strategic planning, working with volunteers, marketing, board development, starting a nonprofit, financial management, and basic operating guidelines. A one-page questionnaire will be developed for each program area. In addition, a case study protocol will be developed that can be conducted with selected organizations to collect in-depth data that evaluates our work with nonprofits over time.

**Alianzas**—The Alianzas program is also developing a framework for evaluation similar to the Strengthening Nonprofit Organizations program. One of the larger efforts has been focused on building networks of stakeholders and service providers. These relationships have lead to a number of programmatic opportunities. The challenge is to effectively measure the contribution of this work. The Bi-national Health Week is developing evaluation measures to evaluate the impact of that program.

**Program #31****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Creating Community Economic Viability

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
803 806	Sociological and Technological Change Affecting Individuals, Youth Development	50% 50%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.0	0.0	0.0	0.0
<b>Actual</b>	5.7	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
<b>Smith-Lever 3b &amp; 3c</b> 0	<b>1890 Extension</b> 0	<b>Hatch</b> 0	<b>Evans-Allen</b> 0
<b>1862 Matching</b> 386790	<b>1890 Matching</b> 0	<b>1862 Matching</b> 0	<b>1890 Matching</b> 0
<b>1862 All Other</b> 0	<b>1890 All Other</b> 0	<b>1862 All Other</b> 0	<b>1890 All Other</b> 0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

To facilitate entrepreneurship as an economic development strategy, we will: work in selected settings (communities and regions in the state) to develop models of excellent entrepreneurial community practice and community economic development; enhance capacity and effectiveness of community members to support entrepreneurship through workshops, training, counseling, developing partnerships, providing referrals, organizational development, participatory visioning and planning; help communities respond to the needs and plans of their entrepreneurs through planning, leadership development, working with the media and building partnerships; develop advanced entrepreneurship skills among Extension specialists through development and delivery of new curricula; and share knowledge and learning that encourages the enhancement of local economies and quality of life through entrepreneurial efforts through web, media, partners, conferences, workshops, seminars, and public policy briefings.

**2. Brief description of the target audience**

Targeted audience is all social groups in the community, including low-income and minority, youth and adults. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc. Primary Audiences: predominantly rural towns, communities, counties and/or multi-county regions and their residents in Missouri that have experienced economic downturn, and have few other opportunities; of these communities, work with ones that have demonstrated a reasonable amount of motivation to work on their situations. Secondary Audiences: communities that would like to learn more about entrepreneurial communities; Extension staff, state and non-profit staff that could benefit from advanced entrepreneurship training.

### V(E). Planned Program (Outputs)

#### 1. Standard output measures

##### Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	4000	10000	500	1000
2007	7034	1740	276	46

#### 2. Number of Patent Applications Submitted (Standard Research Output)

##### Patent Applications Submitted

Year      Target

Plan:    0

2007 :    0

##### Patents listed

#### 3. Publications (Standard General Output Measure)

##### Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	0	0

### V(F). State Defined Outputs

#### Output Target

##### Output #1

##### Output Measure

- Number of communities or regions.

Year	Target	Actual
2007	5	5

##### Output #2

##### Output Measure

- Number of workshops on community entrepreneurship (based on energizing entrepreneurs).

Year	Target	Actual
2007	5	39

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increased knowledge and understanding of local or regional economy and community economic development strategies and their applicability to the situation.
2	Increased knowledge of entrepreneurship.
3	Increase in resources leveraged to address community economic change.
4	Development of community foundations, revolving loan funds, community development corporations.
5	Change in school curricula.
6	% increase in tax receipt levels indicative of increase in equity, wealth and income levels in the community.
7	Dollars generated for community foundations, revolving loan funds, community development corporations.
8	Increased leadership skills in community.
9	Change in number of businesses/jobs created or retained.
10	Increased cooperation across community services/Increase in networks and partnerships.
11	Increased capacity of community to support entrepreneurship and local community economic development.
12	Increase in youth remaining in communities.
13	Change in employment levels.
14	Number of businesses created, half of which will be created by youth.

**Outcome #1****1. Outcome Measures**

Increased knowledge and understanding of local or regional economy and community economic development strategies and their applicability to the situation.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Many community leaders, local elected officials and volunteers lack an understanding of the factors that influence the local economy, what makes up the local economy, the roll of entrepreneurship and small business, how to use economic data to craft development strategies and a basic understanding of the art of economic development. There is some resistance to taking a broader, regional approach to community economic development.

**What has been done**

We provided planning, economic analysis, entrepreneurship training, organizational and leadership development assistance, and seed money for 5 pilot areas selected via an RFP process. Assistance spanned the academic disciplines. We have established a close relationship with the state professional economic development organization to provide economic development training programs. A rural sociology graduate conducted a community survey in Bethany, MO, that focused on how different segments of the community viewed economic development opportunities for the county.

**Results**

Through presentations, workshops and individual contacts, ExCEED has increased awareness of the importance of entrepreneurship in the economy and the need for new approaches and visions for community economic development. Entrepreneurship and place-based economic development are topics that the professional economic development organization is addressing with its members. We are seeing an increase in requests for presentations and workshops from local organizations, county commissions and Extension councils.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #2****1. Outcome Measures**

Increased knowledge of entrepreneurship.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Traditional approaches to economic development, generally tied to external industry attraction, are poor choices for most rural communities. Rural communities lack the financial resources to offer incentives and abatements, have limited skilled workforce, limited access to essential infrastructure and markets. We also work with communities to raise awareness of the importance of youth entrepreneurship training and support.

**What has been done**

ExCEED presented 10 workshops; projects sponsored 23 training programs with 255 attendees. We developed and presented a well received 3-hour workshop, Missouri Entrepreneurial Communities. A more comprehensive program on community economic development and entrepreneurship is being designed for local community leaders, elected officials, and economic development staff. Northwest Missouri presented 5 tourism development sessions. Mississippi River Hills conducted 11 workshops with 170 attendees.

**Results**

Brookfield created an entrepreneurship task force and has undertaken a business visitation program to determine needs of local businesses. Chariton County is preparing a county-wide entrepreneurship survey to garner information on existing and potential entrepreneurs as well as citizen awareness of the impact of entrepreneurship and existing support systems.

ExCEED was recognized as "Community Development Project of the Year: 2006" by the Missouri Community Development Society.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #3****1. Outcome Measures**

Increase in resources leveraged to address community economic change.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	202500

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Communities tend to take a narrow view of resources, generally thinking only in terms of financial resources, and consequently struggle to support community economic initiatives. Entrepreneurial communities pursue opportunities without being limited by the resource on hand—they are resourceful in their thinking and find and leverage a wide array of resources through partnerships, collaborations and new approaches to community economic development.

#### **What has been done**

At state and local level, we are actively engaged in identifying grant opportunities and local organizations to support local initiatives. Regional projects are actively engaging community volunteers to support local initiatives. We are working to establish procedures to track local volunteer hours and contributions.

#### **Results**

Projects have generated \$202,500 in grants this year. We have applied for additional financial support, including a USDA-RBEG to support a youth revolving loan fund (806). The ExCEED program applied to USDA for an RBOG to work with six counties in northeast Missouri to develop an economic development strategy for the region.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities

#### **Outcome #4**

##### **1. Outcome Measures**

Development of community foundations, revolving loan funds, community development corporations.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	3

##### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The creation of foundations and endowments allow communities to capture a portion of the wealth that now leaves rural communities when elderly residents transfer their assets to non-resident heirs. Access to business capital is problematic as many rural banks don't make commercial loans.

#### **What has been done**

Using concepts introduced through training such as Hometown Competitiveness and Energizing Entrepreneurs, 2 projects have successfully undertaken the development of community foundations to support long-term community and economic development and a third project has initiated a revolving loan fund.

#### **Results**

Brookfield incorporated the "Hometown LEGACY Foundation." An inaugural board of directors was appointed, by-laws have been approved and the 501(c)3 status was awarded in June. Fundraising has begun and over \$250,000 is pledged to the foundation. The donation of a vacant building to the Brookfield Area Growth Partnership is evidence of the increasing understanding of the importance of philanthropy within the community. The building was sold and resulted in \$28,000 for community economic development efforts.

Mississippi River Hills Association was formed as a non-profit to guide the project as it moves forward; its board is representational of the industry segments engaged in the project; 501(c)3 status is pending.

Chariton County's Mind Your Own Business project established a youth revolving loan fund to provide support to new youth-owned businesses in the county and applied for a USDA RBEG grant.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

#### Outcome #5

##### 1. Outcome Measures

Change in school curricula.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	11	21

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Retaining and attracting young people is essential for the future of rural places. One proven strategy is to create local employment and business opportunities for young people. The introduction of entrepreneurship and business ownership into the curriculum helps send a strong message there is a future for them in the community.

###### What has been done

Curriculum was introduced into most schools in a 7-county southern Missouri area where 28 business development training sessions were conducted with seniors in 14 school districts. Classes received a mini-grant to start real businesses and each class presented their business and what they learned from the process at a public event. Copies of curriculum were given to 17 schools in Northwest Missouri. Classroom materials, teacher training, student workshops, summer school enhancement, and overnight encampments were provided to Chariton County middle schools.

###### Results

At the end of the school year 13 of the 14 businesses in the Ozark Heritage Region were still in operation, generating sufficient income to sustain the business into the coming school year; all 23 school districts in the region have indicated a desire to participate in the 07-08 school year. Chariton County's efforts resulted in the start-up of 9 youth enterprises and 1 family vegetable/fruit farm.

Brookfield's regional youth e-ship event for 223 high school students which in one business start-up. 113 students participated in two "Be the E" activities in Mississippi River Hills.

Overall, 21 schools have implemented entrepreneurship curriculum and another 17 schools are reviewing curriculum for the 07-08 school year.



**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #6****1. Outcome Measures**

% increase in tax receipt levels indicative of increase in equity, wealth and income levels in the community.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	1	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The bottom line for any economic development initiative has to be an increase in wealth - for the community and for the entrepreneurs. One measure of that is the increase in tax receipts (sales, income, property) in the community and region. Increases in equity and community wealth suggest that the residents are better off financially.

**What has been done**

We provided planning, economic analysis, entrepreneurship training, organizational and leadership development assistance, and some seed money for 5 pilot areas selected through an RFP process. Assistance spanned the academic disciplines. We worked with the state professional economic development organization to provide economic development training programs.

**Results**

At this time, ExCEED is not measuring this impact. It will be part of the broader, long-term evaluation of the project.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #7****1. Outcome Measures**

Dollars generated for community foundations, revolving loan funds, community development corporations.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	315500

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Rural communities tend to be "land-rich, cash-poor" and struggle with economic vitality, underemployment and out migration of youth. By taking control of their own future, through development of foundations, loan funds and community development corporations (CDC), communities can change this pattern. One essential element is access to capital. By creating local sources of capital, communities are empowered to write a new future for their community.

**What has been done**

Projects have been actively engaged to raise funds to support their activities and form foundations and endowments to ensure the continuation of their initiatives. ExCEED stressed the importance of understanding the impact of inter-generational wealth transfer and encouraged communities to form foundations or endowments that can help mitigate the economic impact of this transfer of wealth.

**Results**

Three pilot ExCEED regional projects raised a total of \$315,500 including \$283,000 for their foundations. Chariton County raised \$32,500 for the youth revolving loan fund -- \$5,000 raised locally and a \$27,500 USDA-RBEG grant. Brookfield received an Ameren CDC grant (\$175,000) to assist local business expansion.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

**Outcome #8****1. Outcome Measures**

Increased leadership skills in community.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

For many complicated reasons, having a large, diverse group of potential leaders is a real challenge for many rural communities. We often see the same small number of people taking, or being asked to take, leadership roles in the community. The reasons vary from a reluctance to take on these roles, lack of self-confidence, lack of willingness on the part of the community, reluctance to welcome new leaders and no thought to including youth.

**What has been done**

Leadership development is a corner stone of ExCEED's engagement process. Three of our community projects have sponsored leadership development programs for both youth and adults. Many have used University of Missouri Extension's EXCEL program while others have developed their own programs. Northwest Missouri is developing a leadership program for local leaders and efforts are underway to promote youth leadership development in the region.

**Results**

Regardless of the approach, all projects have seen new faces in the community leadership pool. Projects sponsored 3 programs with 67 participants (27 adults, 40 youth), 38 of which assumed leadership roles in the community. Individuals are serving in leadership positions in the community (Chamber of Commerce, City Council, local newspaper and high school student council president). One Extension Council added two youth members. In Chariton County, 2 graduates are co-chairing the Brunswick Chamber of Commerce and 30 of the 40 youth who participated in leadership training beyond the 8th grade forum are engaged in various roles with student organizations, 8 others are actively involved in civic community organizations outside the school setting.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #9****1. Outcome Measures**

Change in number of businesses/jobs created or retained.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	337

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Failure of traditional economic development strategies has forced rural regions to seek new ways to spur economic activity. Communities create wealth through businesses, jobs and services to sustain the population. Lack of new businesses creates loss of residents, in particular youth, and erosion of the sustainability of the community over time. Entrepreneurship can create new businesses, strengthen/expand existing businesses and generate jobs and careers essential to the vitality of the community.

**What has been done**

We provided training and awareness building opportunities that encourage youth and adults to consider self-employment/entrepreneurship; linked with Extension's Business Development Program (BDP) and SBDCs for business training and counseling services; and helped communities identify existing and potential entrepreneurs.

**Results**

Our Business Development Program reported 161 new and 82 retained jobs in the 5 ExCEED project areas; the projects reported an additional 49 new and 45 retained jobs, 28 new businesses and 7 business expansions. Two examples: A Brookfield business expansion resulted in 43 new and 45 retained jobs, \$1 million in new payroll, and \$2.67 million investment; and, 20 new businesses or new owners welcomed to the community. Northwest Missouri reported 5 new businesses and \$220 million investment in wind farms.

The 4-State Heartland Economic Development Consortium awarded ExCEED a \$3,500 grant to develop a "how to start a business" template that the community customizes to provide local, state and federal business start-up requirements and listings of resource providers. The goal is to make the start-up process more transparent. Sixteen communities are currently using the template.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

#### Outcome #10

##### 1. Outcome Measures

Increased cooperation across community services/Increase in networks and partnerships.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Community-based collaboration is the process by which citizens, agencies, organizations and businesses make formal, sustained commitments to work together to accomplish a shared vision. Collaboration is the highest and most difficult level of working with others - more formal than networking, cooperation and coordination. But in many rural regions, even networking across sectors (e.g., elected officials and community leaders) is challenging.

###### What has been done

ExCEED required projects to have a diverse leadership team to guide the projects. We worked to engage campus faculty and programs with the regional projects and to foster additional partnership with key organizations. A quarterly newsletter provided updates on projects, new initiatives, highlights Extension programs and/or staff expertise, links to current literature on entrepreneurship as well as conferences and training events and provided examples of community entrepreneurship and innovation.

###### Results

The development of networks and partnerships is a key outcome for the project. Mississippi River Hills held open regional meetings which resulted in the formation of stakeholder groups which represent wineries and vineyards, agricultural producers, hospitality, retailers of locally produced goods, artisans, and local government sectors. Community engagement in the project is a key outcome and as of June 30, 2007, 54 different regional entities are participating, 25 people serve on committees and 30 people have leadership roles in the project. External connections include market contacts such as Whole Foods Market.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #11****1. Outcome Measures**

Increased capacity of community to support entrepreneurship and local community economic development.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Most rural communities have no real economic development policy and program. By creating an understanding of the powerful role entrepreneurship can play in building stronger local economies and community, we can foster local support and create a willingness to invest time, money and people to create an entrepreneurial development system (EDS). An EDS is necessary to transform a region; the system needs to be collaborative, comprehensive and regionally focused.

**What has been done**

ExCEED conducted workshops and seminars to educate local elected officials, and community leaders on community economic development and the role entrepreneurship plays in the health of rural communities and provided skills development (e.g., grant writing). ExCEED partnered with Missouri Economic Development Council (MEDC) to create the Fundamentals of Economic Development workshop. A new workshop, Missouri Entrepreneurial Communities, is under development and the creation of a "Rural Development Institute" is under investigation.

**Results**

Chariton County is conducting an entrepreneurial survey of the county to identify potential and existing entrepreneurs and citizen understanding and awareness of entrepreneurial support systems present in the county. In Northwest Missouri, a weekly newspaper column educates citizens on entrepreneurship and highlights local entrepreneurial activities. Eight of 11 participants in a Northwest Missouri training on building and sustaining entrepreneurship plan to start/expand a business. Brookfield conducted an existing business survey to identify training needs.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #12****1. Outcome Measures**

Increase in youth remaining in communities.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Declining populations are a particular challenge for rural Missouri, especially the loss of young people who leave the rural communities for employment in metropolitan areas. One need that we hear from many rural leaders and residents is to reverse the historical and significant trend of youth out-migration. How communities can more effectively involve young people and help them stay or return is a frequently raised concern.

**What has been done**

We worked with five ExCEED projects to identify youth entrepreneurs and provide training, encouragement, mentoring and financial assistance to support their development and business potential. Projects also worked to include youth in community leadership roles. Two projects, Chariton County and Brookfield, had VISTA volunteers working exclusively with youth in their community.

**Results**

Brookfield recognized youth entrepreneurial successes at the annual Chamber of Commerce banquet with an award. Recipient Sam Correll recently opened Parks Sign Company, a graphic arts sign company. At the Brookfield's high school graduation each graduate was presented with a mailbox inscribed with their name and personalized invitation that read: Because we have shared in your life and watched with pride as your individual contributions have become a part of our town's history; the entire Brookfield community, school, city, organizations, businesses and citizens reach out to you at graduation and extend this invitation to always consider this special place your home.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities
806	Youth Development

**Outcome #13****1. Outcome Measures**

Change in employment levels.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Failure of traditional economic development strategy of external attraction; need to focus on growing businesses from within the community, identify the assets of the region to build businesses; and locally-owned businesses more engaged and committed to the community.

**What has been done**

We focused on training opportunities that encouraged youth and adults to consider self-employment/entrepreneurship. We linked with Extension's Business Development Program (BDP) and SBDCs for training and counseling for existing businesses."

**Results**

At this time, ExCEED is not measuring this impact. It will be part of the broader, long-term evaluation of the project.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #14****1. Outcome Measures**

Number of businesses created, half of which will be created by youth.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	20	49

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Declining populations are a particular challenge for rural Missouri, especially the loss of young people who leave the rural communities for employment opportunities in metropolitan areas. The loss of youth not only impact the population, but also means there are fewer people to take over businesses when the owners retire or to start new businesses in the community.

**What has been done**

The ExCEED program presented business training, connected businesses to counselors, and implemented youth entrepreneurship training and loan programs. All 5 ExCEED projects included youth entrepreneurship as part of their project, with 2 as their primary focus. 21 schools (7 middle schools, 14 high schools) adopted entrepreneurship curricula and 355 students participated in classes. Copies of curriculum were provided to 17 schools in the Northwest Missouri project.

**Results**

The benefit from youth entrepreneurship training is long-term and it may be several years before we see a definitive connection between training and youth business ownership. The 5 ExCEED regions reported creation of 49 new businesses, 22 of which are owned by youth. We have found, however, that projects do not have good processes in place to collect this information and we will be helping put better tracking and reporting procedures in place during FY08.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

The primary external factors that impact outcomes are challenges in getting rural communities, elected officials, state government and key decision makers to recognize the need for new strategies for community economic development and to adopt and support efforts, such as ExCEED, to facilitate new approaches. Economic development efforts in Missouri, as many states, continue to focus on external recruitment of businesses rather than on entrepreneurship and development of "home-grown" businesses. Public programs that do focus on entrepreneurs define them in terms of technology and high-growth enterprises. While these strategies can be very successful, they rarely impact rural communities. Many of our rural communities continue to struggle with population decline, especially the loss of young people, contrasted with growth in the senior and migrant populations -- both of which put serious strains on the local community.

Another limiting factor is access to financial resources, both for the program and the communities. One of the key needs in most of the regional projects is access to capital that allows the region to plan and implement new community economic development strategies. The five pilot projects benefited from a small grant from the University of Missouri to participate with ExCEED and to implement new community economic development strategies and all have indicated their project would not have achieved its current level of success without the financial and technical assistance provided by the University. As the project moves forward it will be essential we identify and secure additional funding sources that can assist these rural regions in developing and implementing new community economic development strategies.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants

**Evaluation Results**



The five pilot communities have completed their first year of engagement with ExCEED and report steady progress toward their established goals. While we need to work with the projects to help them develop common outcomes and better mechanisms for tracking results, local match, volunteer hours, etc., preliminary outcomes reported by one or more of the projects include:

- Contributions to local Foundation/Endowments \$283,000
- Other grants received \$202,500
- Leadership Programs/participants 3/67
- Participants who have assumed leadership role in the community 38
- Youth education/training events 38
- Youth participants 846
- Youth-owned businesses started 22
- Training Programs 23
- Attendees at training programs 255
- New Businesses Started 28
- Business Expansions 7
- New Jobs 49
- Retained Jobs 45
- New Investment \$222.67 million
- Business Visitations 40
- Schools Engaged 21 (7 middle schools and 14 high schools)

#### **Key Items of Evaluation**

ExCEED will undertake an in-depth program evaluation in late summer or early fall of 2008 that will include retrospective analysis and the development of case studies with the five pilot projects. At that time the five pilot projects will have been engaged for two years. The goal of the evaluation will be to determine the impact of the project, the learning that occurred, changes made by the community/residents and project long-term impact of the strategies they have implemented. Currently, each of the projects submits quarterly activity and impact reports that provide information on progress toward outcomes.

We have learned from our engagement with the five pilot projects that more up-front evaluation and benchmarking as well as better defined progress reports and training for community leaders on evaluation are needed. The new regional projects, which will be engaged in the fall of 2007, will begin with visioning sessions which will include collection of participant knowledge and awareness. This will be repeated at the end of the engagement to measure learning.

**Program #32****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Aging

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	80%			
803	Sociological and Technological Change Affecting Individuals,	10%			
804	Human Environmental Issues Concerning Apparel, Textiles, ;	10%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	3.0	0.0	0.0	0.0
<b>Actual</b>	7.1	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
461569	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Conduct workshops and multi-session programs, meetings; Develop products, curriculum and resources; Develop curriculum for advocacy groups; Provide training; Work with media; Partner with AARP, Missouri Department of Health and Senior Services, Area Agencies on Aging and national organizations; Assemble and maintain relevant website on how-to strategies.

**2. Brief description of the target audience**

Older adults and their families, persons who work with older adults, persons in mid-life who are preparing for aging, persons over 60, grandparents, baby boomers, homecare providers, disability and aging advocacy groups, home builders/contractors of elderly housing, real estate agents, aging service providers (health and mental health).

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	500	4000	0	0
2007	13477	50234	110	0

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**

**Output #1****Output Measure**

- Number of workshops.

Year	Target	Actual
2007	0	103

**Output #2****Output Measure**

- Number of newsletter articles.

Year	Target	Actual
2007	0	0

**Output #3****Output Measure**

- Number of radio spots.

Year	Target	Actual
2007	0	0

**Output #4****Output Measure**

- Number of one-on-one counseling sessions.

Year	Target	Actual
2007	0	100

**Output #5****Output Measure**

- Number of unique website visits.

Year	Target	Actual
2007	0	95278

**Output #6****Output Measure**

- Number of participant contacts.

Year	Target	Actual
2007	0	14567

**Output #7****Output Measure**

- Number of students reached.

Year	Target	Actual
2007	0	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	# of participants who help manage caregiving roles and responsibilities.
2	Percent of participants who report making changes in family elder care as a result of participation.
3	# of families who use decision making skills to improve quality of life for both caregivers and receivers.
4	Vital productive older adults.
5	Self sufficient older adults.
6	Increased volunteer capacity from older adults.
7	Increased affordable healthcare systems.
8	Increased sense of intergenerational community connectedness.
9	Increased knowledge of how to manage caregiving roles and responsibilities.
10	Increased knowledge of the availability of family elder care.
11	Increased knowledge of decision-making skills necessary to make quality of life decisions for caregivers and receivers.

**Outcome #1****1. Outcome Measures**

# of participants who help manage caregiving roles and responsibilities.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

It is estimated the number of Missouri residents ages 55 to 74 will increase by 15 percent in the next five years. Many older adults want to "age in place", staying in their homes as long as possible. Many of their homes are not designed for persons with declining physical abilities and mobility. The majority of support provided for elders in their homes is provided by family caregivers. Programs in this area provide a great deal of collaboration with other agencies and organizations.

**What has been done**

Provided educational resources to support successful aging and strengthen the aging family. Helping older adults to live safely and independently in their homes as long as possible and their caregivers to have adequate information and support. Resources and guidelines were developed for educators to teach a variety of subjects.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #2****1. Outcome Measures**

Percent of participants who report making changes in family elder care as a result of participation.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

It is estimated the number of Missouri residents ages 55 to 74 will increase by 15 percent in the next five years. Many older adults want to "age in place", staying in their homes as long as possible. Many of their homes are not designed for persons with declining physical abilities and mobility. The majority of support provided for elders in their homes is provided by family caregivers. Programs in this area provide a great deal of collaboration with other agencies and organizations.

#### **What has been done**

Provided educational resources to support successful aging and strengthen the aging family. Helping older adults to live safely and independently in their homes as long as possible and their caregivers to have adequate information and support. Resources and guidelines were developed for educators to teach a variety of subjects.

#### **Results**

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

#### **Outcome #3**

##### **1. Outcome Measures**

# of families who use decision making skills to improve quality of life for both caregivers and receivers.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Action Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

It is estimated the number of Missouri residents ages 55 to 74 will increase by 15 percent in the next five years. Many older adults want to "age in place", staying in their homes as long as possible. Many of their homes are not designed for persons with declining physical abilities and mobility. The majority of support provided for elders in their homes is provided by family caregivers. Programs in this area provide a great deal of collaboration with other agencies and organizations.

#### **What has been done**

Provided educational resources to support successful aging and strengthen the aging family. Helping older adults to live safely and independently in their homes as long as possible and their caregivers to have adequate information and support. Resources and guidelines were developed for educators to teach a variety of subjects.

#### **Results**

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

#### **Outcome #4**

**1. Outcome Measures**

Vital productive older adults.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results**

Eighty-one percent (81%) of program participants evaluated reported learning new strategies to be better able to manage their chronic diseases.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #5****1. Outcome Measures**

Self sufficient older adults.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	81

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

It is estimated the number of Missouri residents ages 55 to 74 will increase by 15 percent in the next five years. Many older adults want to "age in place", staying in their homes as long as possible. Many of their homes are not designed for persons with declining physical abilities and mobility. The majority of support provided for elders in their homes is provided by family caregivers. Programs in this area provide a great deal of collaboration with other agencies and organizations.

**What has been done**



Provided educational resources to support successful aging and strengthen the aging family. Helping older adults to live safely and independently in their homes as long as possible and their caregivers to have adequate information and support. Resources and guidelines were developed for educators to teach a variety of subjects.

#### Results

Over sixty-nine percent (69%) of program participants reported having an increased knowledge of keeping activity and the impact of volunteerism in their daily life.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

#### Outcome #6

##### 1. Outcome Measures

Increased volunteer capacity from older adults.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	67

##### 3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

#### Outcome #7

##### 1. Outcome Measures

Increased affordable healthcare systems.

##### 2. Associated Institution Types

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

It is estimated the number of Missouri residents ages 55 to 74 will increase by 15 percent in the next five years. Many older adults want to "age in place", staying in their homes as long as possible. Many of their homes are not designed for persons with declining physical abilities and mobility. The majority of support provided for elders in their homes is provided by family caregivers. Programs in this area provide a great deal of collaboration with other agencies and organizations.

**What has been done**

Provided educational resources to support successful aging and strengthen the aging family. Helping older adults to live safely and independently in their homes as long as possible and their caregivers to have adequate information and support. Resources and guidelines were developed for educators to teach a variety of subjects.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #8****1. Outcome Measures**

Increased sense of intergenerational community connectedness.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)****What has been done****Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #9****1. Outcome Measures**

Increased knowledge of how to manage caregiving roles and responsibilities.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being

**Outcome #10****1. Outcome Measures**

Increased knowledge of the availability of family elder care.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

Issue (Who cares and Why)

What has been done

Results

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

**Outcome #11****1. Outcome Measures**

Increased knowledge of decision-making skills necessary to make quality of life decisions for caregivers and receivers.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation****V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

## **Evaluation Results**

### **Key Items of Evaluation**

**Program #33****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Business Development

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
602	Business Management, Finance, and Taxation	70%			
603	Market Economics	5%			
604	Marketing and Distribution Practices	5%			
607	Consumer Economics	5%			
608	Community Resource Planning and Development	15%			
	<b>Total</b>	<b>100%</b>			

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	12.5	0.0	0.0	0.0

**2. Actual dollars expended in this Program (includes Carryover Funds from previous years)**

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
820166	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Business counseling and training.

**2. Brief description of the target audience**

Small business owners, managers and their employees. Individuals who want to start a business. Partners, stakeholders and funding agencies, including elected officials.

**V(E). Planned Program (Outputs)****1. Standard output measures****Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	5000	312500	0	0
2007	5291	198975	0	0

**2. Number of Patent Applications Submitted (Standard Research Output)****Patent Applications Submitted****Year      Target****Plan:**    0

2007 :    0

**Patents listed****3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

**V(F). State Defined Outputs****Output Target**

**Output #1****Output Measure**

- Number of counseling clients.

Year	Target	Actual
2007	900	715

**Output #2****Output Measure**

- Training customer satisfaction (scale 1-7 high).

Year	Target	Actual
2007	6	6

**Output #3****Output Measure**

- Number of applied research projects.

Year	Target	Actual
2007	2	2

**Output #4****Output Measure**

- Website statistics (in millions).

Year	Target	Actual
2007	1	0

**Output #5****Output Measure**

- Counseling hours.

Year	Target	Actual
2007	6500	3831

**Output #6****Output Measure**

- Counseling customer satisfaction (scale 1-7 high).

Year	Target	Actual
2007	6	6

**Output #7****Output Measure**

- Training attendees.

Year	Target	Actual
2007	3125	4494

**Output #8****Output Measure**

- Training events.

Year	Target	Actual
2007	200	320

**Output #9****Output Measure**

- Training hours x attendees.

Year	Target	Actual
2007	13000	13500

**Output #10****Output Measure**

- Number of counseling sessions.

Year	Target	Actual
2007	3000	2735



**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	Outcome Name
1	Increase in knowledge.
2	Business owners will start or expand a business as appropriate to their business goals.
3	Business owners will make or revise decisions about the type of business or business structure as appropriate to their business goals.
4	Business owners will prepare a business plan as appropriate to their business goals.
5	Business owners will develop financial projections as appropriate to their business goals.
6	Business owners will seek start-up funding as appropriate to their business goals.
7	Business owners will develop management systems as appropriate to their business goals.
8	Business owners will investigate legal and compliance issues for their business as appropriate to their business goals.
9	Business owners will develop a marketing plan as appropriate to their business goals.
10	Business owners will commercialize products as appropriate to their business goals.
11	Business owners will inform stakeholders of the outcome of their work with the University of Missouri Extension Business Development as appropriate to their business goals.
12	Number of jobs created.
13	Dollar amount of sales and contracts (in millions).
14	Dollar amount of business investments, including loans and equity approved loans (in millions).
15	Number of new businesses started.

**Outcome #1****1. Outcome Measures**

Increase in knowledge.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	1

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Knowledge is a key to success in the business environment. Successful start up and existing businesses must create a foundation of knowledge and expertise in their field to compete and succeed. University of Missouri Extension prides itself in offering non-biased, research based education to strengthen the economic conditions of our businesses, communities, and state.

**What has been done**

The University of Missouri Extension Business Development Program has created specific curriculum and programming that is based on the needs and expectations of the businesses in Missouri. Program delivery and evaluation is tailored to the adult learner and increase in knowledge is evaluated through post-class surveys.

**Results**

The Business Development program recorded an average increase in knowledge from class attendees of 1.2/5. On a five point knowledge scale, participants rated themselves before and after the program and increased their knowledge over one full point. This increase in knowledge is directly translated to Missouri businesses making sound, educated business decisions which created stronger businesses and decreased business failures.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

**Outcome #2****1. Outcome Measures**

Business owners will start or expand a business as appropriate to their business goals.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Entrepreneurs and business owners are the core of our American economy and society. Education in business startup and expansion assist business owners and entrepreneurs in making valid decisions based on facts in relation to their business goals. Curriculum and counseling is offered in business start-up and growth, creating more businesses, and expanding the tax base in counties and throughout the state.

**What has been done**

A focal point of the Business Development program is assisting individuals in starting and growing businesses. Counseling and training specific to business start-up, growth and expansion is offered throughout the state, as well as courses in government procurement and community entrepreneurship. Business Development Specialists are skilled in core business areas: management, financial, marketing, and innovation, and offer businesses a full line of education to meet their business goals.

**Results**

Over 40 businesses were started, and business growth from businesses the program counseled accumulated over 102 million in increased sales and government contracts. Educational offerings and in-depth counseling assisted businesses in reaching their business goals, while many businesses started and grew at rates which far outpaced the average startup and growth rates of the state.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
602	Business Management, Finance, and Taxation

**Outcome #3****1. Outcome Measures**

Business owners will make or revise decisions about the type of business or business structure as appropriate to their business goals.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Business structure plays a key role in the success of a business. Improper business structure or ownership can adversely affect the businesses access to capital, growth, and ability to procure government contracts. Educated decisions in establishing business formation can save businesses from making costly mistakes which could impede funding and sales.

**What has been done**

All start up classes, as well as many targeted programs address legal formation and business structure. Businesses are given the facts regarding the various business structures, and are given assistance in making decisions which positively affect their start-up and growth. Specific programs which offer this include Business Startup and Business Planning classes, two programs which are offered on a routine basis throughout the state.

**Results**

Businesses which have accessed the programming of the Business Development program have made educated decisions on legal formation and structure. Businesses were also referred to various legal, banking, and accounting professionals which supplemented the assistance in educating them on their specific ownership issues and the best legal formation.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

#### Outcome #4

##### 1. Outcome Measures

Business owners will prepare a business plan as appropriate to their business goals.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Research shows that business planning is key to the success of business startup as well as business continuity. Accurate business planning is more than just filling in the numbers on a business plan template. Businesses must continually plan and use feasibility studies, financial projections, and other items which are specific to their industry, their business, and their personal goals. The Business Development program offers business planning classes on a continual basis across the state to aid in business plan development and deployment.

###### What has been done

The Business Development program has served businesses through training and counseling in the researching, creating, deploying, and reviewing of business plans. Business Specialists offer assistance in the core areas of business planning, including finance, marketing, management, and innovation. Businesses are educated to use business plans in their daily business decision making. Specialists educate the business owner of the importance of planning and execution within their business.

###### Results

Over 1,587 businesses were offered training and counseling, and business planning was a key focus of all training and counseling. Businesses were able to access over 23 million in investments through business planning and presentation to funders.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
603	Market Economics

#### Outcome #5

##### 1. Outcome Measures

Business owners will develop financial projections as appropriate to their business goals.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Educating businesses on financial projections is a key aspect of creating a more educated, successful business community. Research shows businesses which create and use accurate financial sheets and projections make more educated decisions and can more accurately control debt, cash flow, and profits. Over 70% of small businesses state they struggle with using and understanding financial reports, while lending institutions state that a key element in business success is understanding financial statements and projections.

**What has been done**

In 2005 a three part course was established and deployed across the state in assisting entrepreneurs in understanding financial statements, controlling cash flow, and projecting financial needs. This program has been offered statewide for over two years. Additionally, in-depth counseling, through use of financial projection tools, accounting software such as QuickBooks continues to be offered to both start-up and existing businesses.

**Results**

Financial assistance through counseling and training continues to be one of the most requested and offered programs of the Business Development Program. The Business Development program continues to offer strong counseling and training in the area of financial projections, and businesses accessed over 23 million in investments through the development and use of financial statements and projections.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics

**Outcome #6****1. Outcome Measures**

Business owners will seek start-up funding as appropriate to their business goals.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Access to capital can be a daunting obstacle for many businesses. Seeking and securing funding through lending institutions, private funders, research grants, and various other funding possibilities is generally a maze for businesses. Understanding how to access capital, in conjunction with business planning, financial projections and market studies, is very important to the success of businesses in Missouri. Offering assistance in the identification and application process of funding can dramatically improve the success rates of capitalization.

#### **What has been done**

The Business Development program has a full line of training and counseling tools to assist small businesses in their start-up funding. Experience in this market has allowed the Business Development program to assist start-up companies in the core elements of business planning, financial projections, and market analysis, all increasing the rates of start up funding and success.

#### **Results**

The Business Development program assisted over 20 businesses in their successful start-up endeavors, with a key component of securing start-up financing and capital. Additionally, training and counseling was offered to other businesses in their start-up endeavors, and with a knowledge increase of over 1 on a 5 point scale, potential business owners were educated on start-up financing and were able to make informed educated decisions when accessing start-up funding.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
603	Market Economics
602	Business Management, Finance, and Taxation

#### **Outcome #7**

##### **1. Outcome Measures**

Business owners will develop management systems as appropriate to their business goals.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Action Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	0	0

##### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Over 80% of business owners are technically qualified in their area of business, while only 20% have the managerial experience and background to successfully manage their business. Many business owners prefer the daily production aspect of their business as opposed to the managerial and leadership functions which are key to the success of their business. Understanding how to effectively manage and create managerial processes in their business can dramatically increase the success and profitability of their business.

#### **What has been done**

The Business Development program has created and adapted many research proven managerial tools and techniques which they use in their training and counseling. Six Sigma, Baldrige, SMART, and other management systems and processes are used with clients and participants to assist them in seeing the value of managerial process and leadership.

#### **Results**

Missouri businesses served by the University of Missouri Extension Business Development program were educated in the importance of management systems, and in-depth counseling was offered to many businesses in the area of business management. Research based management systems were taught and deployed in Missouri businesses, allowing them to reduce costs associated with errors, increase quality, and trim their bottom line.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

#### Outcome #8

##### 1. Outcome Measures

Business owners will investigate legal and compliance issues for their business as appropriate to their business goals.

##### 2. Associated Institution Types

•1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Businesses which are not in compliance with local, state and national regulations and policies risk huge financial penalties, loss in profits, and business failure. Additionally, employees and customers of these businesses may be harmed by the businesses inability to comply with policies and standards. Communities in which these businesses reside risk the negative economic and societal outcomes associated with the behaviors of these businesses. Unfortunately, many small businesses are not educated on the numerous and important business regulations and policies. Education is essential for business success in this area.

###### What has been done

The Business Development program is a key delivery system in the awareness and education of businesses pertaining to business regulations, policies, permits, etc. The Business Development program has built a strong referral and network system throughout the whole state of Missouri to assist and refer businesses to the proper entity and organization for specific business needs. A new partnership with the state of Missouri allows the Business Development program to use and support the Secretary of State's business portal, which greatly assists small businesses in understanding compliance and regulatory issues.

###### Results

Small businesses in Missouri which accessed the Business Development programs website and Specialists were offered education in many compliance and regulatory areas. This equated to a savings both by the businesses, but also to Missouri and communities, as these businesses were safer, more stable and avoided costly penalties assessed for non-compliance. Economic, societal and environmental policies have been explained to small businesses and therefore they worked to understand and stay in compliance with these policies.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
608	Community Resource Planning and Development
602	Business Management, Finance, and Taxation

#### Outcome #9

**1. Outcome Measures**

Business owners will develop a marketing plan as appropriate to their business goals.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Marketing is often described as both an art and a science. A great product or service is worth nothing if it lacks a marketing plan. Small businesses often struggle with marketing, and do not understand their customer, their competitors, their price or their competitive advantage. Educating businesses on the science of marketing increases their marketing return on investment, securing a stronger profit margin.

**What has been done**

The University of Missouri Extension Business Development program has spent valuable time and energy in creating curriculum, tools, and educational offerings specific to marketing. Various new marketing research tools were added to the program, offering Business Development Specialists the ability to create invaluable market research, demographics, and marketing resources for their customers.

**Results**

Businesses served by the University of Missouri Extension Business Development program were offered access to market research and demographics that would have been too costly for them to access in the private market. Communities were also offered market research and were assisted in using this research to create economic development plans, and make educated decisions on the future of their communities. Businesses were able to increase sales and government contracts by over 102 million dollars, which is a key indicator of marketing and market research.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices

**Outcome #10****1. Outcome Measures**

Business owners will commercialize products as appropriate to their business goals.

**2. Associated Institution Types**

•1862 Extension



**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Innovation and commercialization drives economic development and creates jobs, businesses, and wealth. Businesses who are innovative and are working in the area of research, commercialization and intellectual property, often face obstacles when identifying and securing funding, as well as taking a final product to market. America's future success is dependent on small business innovation and support of research and commercialization.

**What has been done**

The University of Missouri Extension Business Development program has specific resources available in the commercialization area. The MOFAST effort links University resources (counseling and expertise) to small businesses, entrepreneurs and researchers, significantly increasing the success of their commercialization efforts. A specific area to this program is assisting businesses in accessing federal dollars to fund their research and commercialization. Additionally, researchers are matched with businesses in efforts to spur innovation and successful commercialization and products.

**Results**

The University of Missouri Extension Business Development program assisted small businesses in applying for over 3 million in federal research funds, and assisting businesses and researchers to secure over 1 million in funds. Businesses were offered in-depth counseling on research funding, feasibility and market studies, access to capital, and business management.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development

**Outcome #11****1. Outcome Measures**

Business owners will inform stakeholders of the outcome of their work with the University of Missouri Extension Business Development as appropriate to their business goals.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	30

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Missouri businesses which were direct contacts of the University of Missouri Extension Business Development Program can greatly assist in helping others understand the importance of Extension and the positive impacts it has on the Missouri economy and communities. Satisfied contacts that have directly been benefited by our program are essential in educating stakeholders about the program.

#### **What has been done**

Businesses and individuals who have accessed the Business Development program and have benefited through the services, are given opportunities to inform and educate the stakeholders of the University of Missouri Extension Business Development program.

#### **Results**

Over 30 businesses have reported back to our program that they have made personal contact with various stakeholders in informing them of their success which was made possible by our program. A broader understanding by local, regional, and statewide stakeholders have assisted the program in marketing the services and continuing the financial support of the program.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development

#### **Outcome #12**

##### **1. Outcome Measures**

Number of jobs created.

##### **2. Associated Institution Types**

•1862 Extension

##### **3a. Outcome Type:**

Change in Condition Outcome Measure

##### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	625	2039

##### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Research proves that jobs are the key indicator of economic stability and growth. Job retention and creation is one of the essential elements in economic development. Small businesses employ over 50% of the workforce, while over 80% of new jobs are created by small businesses. Education and assistance to businesses in assisting them with job creation and growth is essential to the economic success of Missouri.

#### **What has been done**

Job growth in businesses is assisted through education, specific to marketing, finance, government procurement, management and innovation. Leading measures of increased sales and government procurements positively affect job growth. Additionally, the Business Development program offers educational offerings.

#### **Results**

The Business Development program was successful in assisting business to create and retain more that 2,000 jobs. This was achieved by assisting businesses with sales, government procurement, human resources management, cost controls, and innovation. These jobs created community wealth, stability and the tax base to support the business and educational infrastructure.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
602	Business Management, Finance, and Taxation

**Outcome #13****1. Outcome Measures**

Dollar amount of sales and contracts (in millions).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	150	102

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The economic and societal prosperity of Missouri is dependent on Missouri businesses increasing their sales and government contracts. Sales and government contracts directly support jobs and the wealth of families, communities and the state.

**What has been done**

Businesses are educated in ways to increase sales and government contracts both through educational offerings and one-on-one counseling. Various market research tools, government contracting tools, and management systems are used in educating businesses in sales growth and government procurement.

**Results**

The University of Missouri Extension Business Development program assisted businesses in securing over 102 million in increased sales and government contracts. This impact is documented through client signatures and then validated through a yearly independent research study. This increase in sales and government contracts had a direct positive impact on Missouri's businesses, economy, society, and educational system.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
608	Community Resource Planning and Development

**Outcome #14****1. Outcome Measures**

Dollar amount of business investments, including loans and equity approved loans (in millions).

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	15	23

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Access to capital is a key element for the success of business in Missouri. Often accessing capital is very hard for small businesses as they are not adequately educated and prepared to present business plans to funders. Small businesses often fail as they are not adequately funded in their start-up and growth phases.

**What has been done**

The University of Missouri Extension Business Development program has curriculum and counseling tools to assist small businesses in preparing business plans, and identifying possible funders. Additionally Business Development Specialists assist businesses in the business plan areas of finance, marketing, management, and innovation.

**Results**

The Business Development program assisted businesses in accessing over 23 million in capital through loans, investments and equity. These businesses leverage this investment to increase business success and increase jobs, sales and government contracts.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

**Outcome #15****1. Outcome Measures**

Number of new businesses started.

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	20	44

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Small businesses are the economic engine for the state of Missouri, creating over 80% of all new jobs, and creating business opportunities in both rural and urban areas of the state. New businesses need in-depth education to be successful.

**What has been done**

The Business Development program has curriculum and counseling tools to educate entrepreneurs in their quest to start a new business. A three hour start up program is offered throughout the state, which is then followed-up with one-on-one counseling to assist entrepreneurs with business planning, funding, and success.

**Results**

The University of Missouri Extension Business Development program assisted Missourians in starting over 40 businesses. The Business Development program offered these startups in-depth counseling and educational assistance which helped in their business success.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Natural Disasters (drought,weather extremes,etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programatic Challenges
- Populations changes (immigration,new cultural groupings,etc.)

**Brief Explanation**

Economic conditions have slowed but the Business Development program has met and exceeded internal goals.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals,group,organizations) and non-participants
- Other (Customer satisfaction)

**Evaluation Results**

The University of Missouri Extension Business Development has a research-based evaluation system which uses post class survey, time elapsed surveys, case studies, client secured impact and personal and electronic interviews. The evaluation system is based on program based evaluations and all aspects of the evaluation program are reviewed by the University. of Missouri Institutional Review Board

The Business Development program evaluates the quality of its programs in the areas of training and counseling. Training is assessed through post class surveys, as well as time series surveys which are sent 12 months following the training. Counseling is evaluated through a post survey to counseling clients. Additionally, a rigorous evaluation system of performance results is used to validate impact through client validation.

Evaluation results for the Business Development training include:

96% of training attendees would recommend the program

The overall rating based on the practicality of the program was a 6.25/7

The overall rating based on instructor ability was a 6.6/7

The overall rating of the program was a 6.36/7

Participants showed an increase of knowledge of 1.2/5

Post-class training resulted in participants:

83% of participants took action after the training

Over 4% of participants received investments after the training and attributed this to the training

Over 10% of participants increased profits after the training and attributed this to the training

Evaluation results for the Business Development counseling include:

97% of received prompt attention

92% of counseled clients stated the Business Specialist responded to their needs

92% of counseled clients state they would recommend our program

The overall counseling rating was a 6.2/7

Evaluation results for key outcomes are included within the quantitative results of the AREERA report.

**Key Items of Evaluation**

The University uses the below key evaluation items: of Missouri Extension Business Development Program

Outcomes:

Investments

Jobs

Business Started

Increase in Sales

Government Contracts

Research awards

Outputs:

Training: hours, events, attendees

Counseling: hours, counseling sessions, client

Stakeholder education

Audience demographics

Quality:

Overall Rating, Would recommend, Knowledge increase, Prompt Attention, Instructor Rating, Practical training,  
Instructor rating